

## SEQUENCE LISTING

<110> Jiang, Cai-Zhong  
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Sherman, Bradley K

<120> METHODS FOR MODIFYING PLANT BIOMASS AND TOLERANCE TO ABIOTIC  
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<150> US 60/227,439  
<151> 2000-08-22

<150> US 09/506,720  
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<150> US 60/310,847  
<151> 2001-08-09

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<151> 2003-04-10

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Pro Pro Thr Ile Ile Thr Arg Asp Ser Pro Asn Val Leu Arg Ser His
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Val Leu Glu Val Thr Ser Gly Ser Asp Ile Ser Glu Ala Val Ser Thr
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Gly Val Ile Thr Leu His Gly Arg Phe Asp Ile Leu Ser Leu Thr Gly
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Gly Ile Asn Leu Ile Asp Gln His His His Gln His Gln Gln His Gln
      35             40             45

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Gln Gln Gln Gln Pro Ser Asp Asp Ser Arg Glu Ser Asp His Ser Asn
      50             55             60

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Lys Asp His His Gln Gln Gly Arg Pro Asp Ser Asp Pro Asn Thr Ser
      65             70             75             80

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Ser Ser Ala Pro Gly Lys Arg Pro Arg Gly Arg Pro Pro Gly Ser Lys
      85             90             95

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Asn Lys Ala Lys Pro Pro Ile Ile Val Thr Arg Asp Ser Pro Asn Ala
      100            105            110

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Leu Arg Ser His Val Leu Glu Val Ser Pro Gly Ala Asp Ile Val Glu
      115            120            125

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Ser Val Ser Thr Tyr Ala Arg Arg Arg Gly Arg Gly Val Ser Val Leu
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180 185 190

Pro Ala Pro Pro Gly Ala Gly Gly Leu Ser Ile Phe Leu Ala Gly Gly  
195 200 205

Gln Gly Gln Val Val Gly Gly Ser Val Val Ala Pro Leu Ile Ala Ser  
210 215 220

Ala Pro Val Ile Leu Met Ala Ala Ser Phe Ser Asn Ala Val Phe Glu  
225 230 235 240

Arg Leu Pro Ile Glu Glu Glu Glu Glu Glu Gly Gly Gly Gly Gly Gly  
245 250 255

Gly Gly Gly Gly Gly Pro Pro Gln Met Gln Gln Ala Pro Ser Ala Ser  
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Pro Pro Ser Gly Val Thr Gly Gln Gly Gln Leu Gly Gly Asn Val Gly  
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130 135 140

Ala Asn Val Thr Leu Arg Gln Pro Ser Thr Ala Ala Val Ala Ala Ala  
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Ser Leu Thr Gly Ser Phe Leu Pro Gly Pro Ala Pro Pro Gly Ser Thr  
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Gly Leu Thr Ile Tyr Leu Ala Gly Gly Gln Gly Gln Val Val Gly Gly  
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Ser Val Val Gly Pro Leu Met Ala Ala Gly Pro Val Met Leu Ile Ala  
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Ala Thr Phe Ser Asn Ala Thr Tyr Glu Arg Leu Pro Leu Glu Glu Glu  
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Asn Ser Asp Asp Glu Ser Asp Ser Asn Lys Asp Pro Gly Ser Asp Pro  
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Val Thr Ser Gly Ser Thr Gly Lys Arg Pro Arg Gly Arg Pro Pro Gly  
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Ser Lys Asn Lys Pro Lys Pro Pro Val Ile Val Thr Arg Asp Ser Pro  
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Asn Val Leu Arg Ser His Val Leu Glu Val Ser Ser Gly Ala Asp Ile  
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Val Glu Ser Val Thr Thr Tyr Ala Arg Arg Arg Gly Arg Gly Val Ser  
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Ile Leu Ser Gly Asn Gly Thr Val Ala Asn Val Ser Leu Arg Gln Pro  
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Ala Thr Thr Ala Ala His Gly Ala Asn Gly Gly Thr Gly Gly Val Val  
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Ala Leu His Gly Arg Phe Glu Ile Leu Ser Leu Thr Gly Thr Val Leu  
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Pro Pro Pro Ala Pro Pro Gly Ser Gly Gly Leu Ser Ile Phe Leu Ser  
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Val Gly Pro Leu Val Ala Ala Gly Pro Val Val Leu Met Ala Ala Ser  
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Glu Val Ala Ala Pro Ala Ala Gly Gly Glu Ala Gln Asp Gln Val Ala  
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Gln Ser Ala Gly Pro Pro Gly Gln Gln Pro Ala Ala Ser Gln Ser Ser  
275 280 285

Gly Val Thr Gly Gly Asp Gly Thr Gly Gly Ala Gly Gly Met Ser Leu  
290 295 300

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cggcggcgcg ggcgggggca ggaaggagcc cgcgagggag agtatctcga acctgccgtg 420

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cagcgtcgcc accgccggcg aggccggccc gggctgcgcc gactgcggct gccggagcgt      480
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gtacgccgtc agcgctcga acacatcgca accggcggtt acctcgagga tatgcgccct      600
gagcgcgttg gcgctctccc tggatgatgat caccggcggc ttgggcttgt tcttgagacc      660
cgggcgggcg ccgcgggggc ggcgagcgac gacctcgccg ccgccgatcc cggcgccacc      720
ggcgtgctg ctggggccgc cgccaccgcc gctccccggc gagaggctgt cgtggccgcc      780
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<210> 12
<211> 289
<212> PRT
<213> Oryza sativa

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<220>
<223> G3407 polypeptide

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```

<400> 12

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Met Ala Gly Leu Asp Leu Gly Thr Ser Tyr Leu His His His Gln Ser
1           5           10           15

```

```

Leu His Leu Arg His Asp Asp Gly Gly Ala Gly Ser Asp Asp Gly Gly
          20           25           30

```

```

His Asp Asp Leu Ser Pro Gly Ser Gly Gly Gly Gly Gly Pro Ser Ser
          35           40           45

```

```

Thr Ala Gly Gly Ala Gly Ile Gly Gly Gly Glu Val Val Ala Arg Arg
          50           55           60

```

```

Pro Arg Gly Arg Pro Pro Gly Ser Lys Asn Lys Pro Lys Pro Pro Val
          65           70           75           80

```

```

Ile Ile Thr Arg Glu Ser Ala Asn Ala Leu Arg Ala His Ile Leu Glu
          85           90           95

```

```

Val Ala Ala Gly Cys Asp Val Phe Glu Ala Leu Thr Ala Tyr Ala Arg
          100          105          110

```

```

Arg Arg Gln Arg Gly Val Cys Val Leu Ser Ala Ala Gly Thr Val Ala
          115          120          125

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Asn Val Thr Leu Arg Gln Pro Gln Ser Ala Gln Pro Gly Pro Ala Ser
          130          135          140

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Pro Ala Val Ala Thr Leu His Gly Arg Phe Glu Ile Leu Ser Leu Ala  
145 150 155 160

Gly Ser Phe Leu Pro Pro Pro Ala Pro Pro Gly Ala Thr Ser Leu Ala  
165 170 175

Ala Phe Leu Ala Gly Gly Gln Gly Gln Val Val Gly Gly Ser Val Ala  
180 185 190

Gly Ala Leu Ile Ala Ala Gly Pro Val Val Val Val Ala Ala Ser Phe  
195 200 205

Ser Asn Val Ala Tyr Glu Arg Leu Pro Leu Glu Asp Gly Asp Glu Val  
210 215 220

Val Pro Pro Ala Pro Ala Gly Ser Asp Gln Gly Gly Gly Gly Ser Gly  
225 230 235 240

Gly Met Pro Pro Leu Gly Val Asp Pro Ser Gly Gly Ala Ala Thr Gly  
245 250 255

Gly Leu Pro Phe Phe Asn Met Pro Phe Gly Met Pro Pro Met Pro Val  
260 265 270

Asp Gly His Ala Gly Trp Pro Gly Ala Gly Val Gly Arg Pro Pro Phe  
275 280 285

Ser

<210> 13  
<211> 1344  
<212> DNA  
<213> Glycine max

<220>  
<223> G3456

<400> 13  
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gagaactctg gccactcgat gaaaaaaccg gatctggggt tttccatgaa cgagagtacg 180  
gtgacgggga accatatagg agaagaagat gaggacagag aaaacagcga cgagccaaga 240  
gagggagcta ttgacgtcgc caccacgcgc cgccctaggg gacgtccacc gggctccaga 300  
aacaagccga aaccgccgat attcgtcacc cgagacagcc ctaacgcgct gcggagccac 360

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<210> 14  
 <211> 280  
 <212> PRT  
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<220>  
 <223> G3456 polypeptide

<400> 14

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Met Ala Asn Arg Trp Trp Thr Gly Ser Val Gly Leu Glu Asn Ser Gly
1           5           10          15

```

```

His Ser Met Lys Lys Pro Asp Leu Gly Phe Ser Met Asn Glu Ser Thr
          20          25          30

```

```

Val Thr Gly Asn His Ile Gly Glu Glu Asp Glu Asp Arg Glu Asn Ser
      35          40          45

```

```

Asp Glu Pro Arg Glu Gly Ala Ile Asp Val Ala Thr Thr Arg Arg Pro
  50          55          60

```



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Arg Gly Arg Pro Pro Gly Ser Arg Asn Lys Pro Lys Pro Pro Ile Phe  
65 70 75 80

Val Thr Arg Asp Ser Pro Asn Ala Leu Arg Ser His Val Met Glu Ile  
85 90 95

Ala Val Gly Ala Asp Ile Ala Asp Cys Val Ala Gln Phe Ala Arg Arg  
100 105 110

Arg Gln Arg Gly Val Ser Ile Leu Ser Gly Ser Gly Thr Val Val Asn  
115 120 125

Val Asn Leu Arg Gln Pro Thr Ala Pro Gly Ala Val Met Ala Leu His  
130 135 140

Gly Arg Phe Asp Ile Leu Ser Leu Thr Gly Ser Phe Leu Pro Gly Pro  
145 150 155 160

Ser Pro Pro Gly Ala Thr Gly Leu Thr Ile Tyr Leu Ala Gly Gly Gln  
165 170 175

Gly Gln Ile Val Gly Gly Glu Val Val Gly Pro Leu Val Ala Ala Gly  
180 185 190

Pro Val Leu Val Met Ala Ala Thr Phe Ser Asn Ala Thr Tyr Glu Arg  
195 200 205

Leu Pro Leu Glu Asp Asp Asp Gln Glu Gln His Gly Gly Gly Gly Gly  
210 215 220

Gly Gly Ser Pro Gln Glu Lys Asn Gly Gly Pro Gly Glu Ala Ser Ser  
225 230 235 240

Ser Ile Ser Val Tyr Asn Asn Asn Val Pro Pro Ser Leu Gly Leu Pro  
245 250 255

Asn Gly Gln His Leu Asn His Glu Ala Tyr Ser Ser Pro Trp Gly His  
260 265 270

Ser Pro His Ala Arg Pro Pro Phe  
275 280

<210> 15  
<211> 1596  
<212> DNA  
<213> Glycine max

<220>

<223> G3459

<400> 15

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cttttctttc	tctgcactcc	atctttcttt	ccaaaaccca	cccttttcta	ttcctcttcc	180
tcttctctct	tttcccttct	ttttatttcc	ttacactcac	aacatttccc	ttaaaataaa	240
cataaacaaa	ccagcactgt	tcttgacccc	caaaaaaaaa	aaatctctac	tatttattaa	300
ctatattaat	tcctccataa	tataatcatt	tgttttcctt	gttttctggt	ttctcttata	360
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aacatatata	taaactatat	gttttttctt	cttcttcatg	ttattttggt	tttttcttat	1500
gttggttaatg	gatataatat	gacatgataa	ttattatgta	gtctgatttt	catctccttg	1560
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<210> 16

<211> 295

<212> PRT

<213> Glycine max

<220>

<223> G3459 polypeptide

<400> 16

Met Ala Gly Leu Asp Leu Gly Ser Ala Ser Arg Phe Val Gln Asn Leu  
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His Arg Pro Asp Leu His Leu Gln Gln Asn Phe Gln Gln His Gln Asp  
20 25 30

Gln Gln His Gln Arg Asp Leu Glu Glu Gln Lys Thr Pro Pro Asn His  
35 40 45

Arg Met Gly Ala Pro Phe Asp Asp Asp Ser Asp Asp Arg Ser Pro Gly  
50 55 60

Leu Glu Leu Thr Ser Gly Pro Gly Asp Ile Val Gly Arg Arg Pro Arg  
65 70 75 80

Gly Arg Pro Pro Gly Ser Lys Asn Lys Pro Lys Pro Pro Val Ile Ile  
85 90 95

Thr Arg Glu Ser Ala Asn Thr Leu Arg Ala His Ile Leu Glu Val Gly  
100 105 110

Ser Gly Ser Asp Val Phe Asp Cys Val Thr Ala Tyr Ala Arg Arg Arg  
115 120 125

Gln Arg Gly Ile Cys Val Leu Ser Gly Ser Gly Thr Val Thr Asn Val  
130 135 140

Ser Leu Arg Gln Pro Ala Ala Ala Gly Ala Val Val Thr Leu His Gly  
145 150 155 160

Arg Phe Glu Ile Leu Ser Leu Ser Gly Ser Phe Leu Pro Pro Pro Ala  
165 170 175

Pro Pro Gly Ala Thr Ser Leu Thr Ile Tyr Leu Ala Gly Gly Gln Gly  
180 185 190

Gln Val Val Gly Gly Asn Val Ile Gly Glu Leu Thr Ala Ala Gly Pro  
195 200 205

Val Ile Val Ile Ala Ala Ser Phe Thr Asn Val Ala Tyr Glu Arg Leu  
210 215 220

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Pro Leu Glu Glu Asp Glu Gln Gln Gln Gln Gln Gln Gln Leu Gln Ile  
225 230 235 240

Gln Pro Pro Ala Thr Thr Ser Ser Gln Gly Asn Asn Asn Asn Asn Asn  
245 250 255

Pro Phe Pro Asp Pro Ser Ser Gly Leu Pro Phe Phe Asn Leu Pro Leu  
260 265 270

Asn Met Gln Asn Val Gln Leu Pro Val Glu Gly Trp Ala Val Asn Pro  
275 280 285

Ala Ser Arg Pro Gln Pro Phe  
290 295

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<211> 1443  
<212> DNA  
<213> Glycine max

<220>  
<223> G3460

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aaaaaattat ctactattta ttaactatat ttctccatat tataatcatt tgtattcctt 180  
gttttctatg cttctcttat aatatataac cttcgtttta tttatttttt ttgttttgca 240  
ccttgtggat tgtgagctat atctatttat atatatcatt ctctttcttt ttttttggat 300  
gtttctatgg ctggtttgga tttaggaagc gcgtcacgct ttgttcagaa tcttcactta 360  
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caagagactc ctccgaacct gggaacagcg ctggcgccgt tcgacaacga tgatgacaaa 480  
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gaattaaccg cggcagggcc agtaatcgtc atcgcagcat cgttcaccaa cgtggcttac 960  
gagaggctcc ccttagaaga agatgaacag cagcatcaac agcttcagat tcagtcaccc 1020

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<210> 18  
 <211> 276  
 <212> PRT  
 <213> Glycine max

<220>  
 <223> G3460 polypeptide

<400> 18

Met Ala Gly Leu Asp Leu Gly Ser Ala Ser Arg Phe Val Gln Asn Leu  
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His Leu Pro Asp Leu His Leu Gln Gln Asn Tyr Gln Gln Pro Arg His  
 20 25 30

Lys Arg Asp Ser Glu Glu Gln Glu Thr Pro Pro Asn Pro Gly Thr Ala  
 35 40 45

Leu Ala Pro Phe Asp Asn Asp Asp Asp Lys Ser Gln Gly Leu Glu Leu  
 50 55 60

Ala Ser Gly Pro Gly Asp Ile Val Gly Arg Arg Pro Arg Gly Arg Pro  
 65 70 75 80

Ser Gly Ser Lys Asn Lys Pro Lys Pro Pro Val Ile Ile Thr Arg Glu  
 85 90 95

Ser Ala Asn Thr Leu Arg Ala His Ile Leu Glu Val Gly Ser Gly Ser  
 100 105 110

Asp Val Phe Asp Cys Val Thr Ala Tyr Ala Arg Arg Arg Gln Arg Gly  
 115 120 125

Ile Cys Val Leu Ser Gly Ser Gly Thr Val Thr Asn Val Ser Leu Arg  
 130 135 140

Gln Pro Ala Ala Ala Gly Ala Val Val Arg Leu His Gly Arg Phe Glu  
145 150 155 160

Ile Leu Ser Leu Ser Gly Ser Phe Leu Pro Pro Pro Ala Pro Pro Gly  
165 170 175

Ala Thr Ser Leu Thr Ile Tyr Leu Ala Gly Gly Gln Gly Gln Val Val  
180 185 190

Gly Gly Asn Val Val Gly Glu Leu Thr Ala Ala Gly Pro Val Ile Val  
195 200 205

Ile Ala Ala Ser Phe Thr Asn Val Ala Tyr Glu Arg Leu Pro Leu Glu  
210 215 220

Glu Asp Glu Gln Gln His Gln Gln Leu Gln Ile Gln Ser Pro Ala Ala  
225 230 235 240

Thr Ser Ser Gln Gly Asn Asn Asn Asn Asn Pro Phe Pro Asp Pro Ser  
245 250 255

Ser Gly Leu Pro Phe Phe Asn Leu Pro Leu Asn Met Gln Asn Val Gln  
260 265 270

Leu Pro Pro Phe  
275

<210> 19  
<211> 1005  
<212> DNA  
<213> Oryza sativa

<220>  
<223> G3408

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caccgagacg gacaccgacg cgtcgtcgtc ggcggggagg cggtggaagg tggggttggt 300  
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ggcctggggc gccacggagg acatggccgg aggcaggaac gtggccgaca gggagaggat 480

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ctcgtaccgg ccgtggaaca cgatcgagc cggagctgag cccgggaccc cgggtgacgg      540
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<210> 20  
 <211> 334  
 <212> PRT  
 <213> Oryza sativa

<220>  
 <223> G3408 polypeptide

<400> 20

Met Ser Phe Cys Glu Arg Asp Met Asn Lys Glu Ser Met Tyr Gln Glu  
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Arg Asp Asp Met Ala Gly Ile Arg Phe Ala Thr Pro Pro Leu Pro Gln  
20 25 30

Gln Gln Gln Gln Gln Gln Leu Val Glu Cys Phe Ser Asp Glu Val Asp  
35 40 45

Ser Arg Gly Ser Gly Gly Glu Met Lys Asp Ala Val Gly Ser Gly Ser  
50 55 60

Gly Gln Leu Val Val Val Gly Gly Gly Asp Gly Ala Ser Ile Glu Val  
65 70 75 80

Ala Lys Lys Arg Arg Gly Arg Pro Pro Gly Ser Lys Asn Lys Pro Lys  
85 90 95

Pro Pro Val Val Ile Thr Arg Glu Ala Glu Pro Ala Ala Ala Met Arg  
100 105 110

Pro His Val Ile Glu Ile Pro Gly Gly Arg Asp Val Ala Glu Ala Leu  
115 120 125

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Ala Arg Phe Ser Ser Arg Arg Asn Leu Gly Ile Cys Val Leu Ala Gly  
130 135 140

Thr Gly Ala Val Ala Asn Val Ser Leu Arg His Pro Ser Pro Gly Val  
145 150 155 160

Pro Gly Ser Ala Pro Ala Ala Ile Val Phe His Gly Arg Tyr Glu Ile  
165 170 175

Leu Ser Leu Ser Ala Thr Phe Leu Pro Pro Ala Met Ser Ser Val Ala  
180 185 190

Pro Gln Ala Ala Val Ala Ala Ala Gly Leu Ser Ile Ser Leu Ala Gly  
195 200 205

Pro His Gly Gln Ile Val Gly Gly Ala Val Ala Gly Pro Leu Tyr Ala  
210 215 220

Ala Thr Thr Val Val Val Val Ala Ala Ala Phe Thr Asn Pro Thr Phe  
225 230 235 240

His Arg Leu Pro Ala Asp Asp Asp Ala Ser Val Ser Val Ser Val Ser  
245 250 255

Leu Ser Gly Ser Gly Asp Ala Asp Glu His Arg Gly His Gln His Lys  
260 265 270

Pro Glu Pro Gln Glu Pro Arg Gln Leu Arg Arg Pro Pro Pro His Leu  
275 280 285

Ser Ala Ala Ala Ala Val Ser Ala Ala Gln Pro Val Glu Pro Cys Gly  
290 295 300

Ala Pro Met Tyr Ala Cys His Pro Gln Pro Gln Glu Val Met Trp Pro  
305 310 315 320

Pro Pro Ala Arg Thr Pro His Pro Pro Pro Pro Pro Pro Tyr  
325 330

<210> 21  
<211> 801  
<212> DNA  
<213> Oryza sativa

<220>  
<223> G3403

<400> 21  
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60



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<210> 22  
 <211> 266  
 <212> PRT  
 <213> Oryza sativa

<220>  
 <223> G3403 polypeptide

<400> 22

Met Gly Leu Pro Glu Gln Pro Ser Gly Ser Ser Gly Pro Lys Ala Glu  
 1 5 10 15

Leu Pro Val Ala Lys Glu Pro Glu Ala Ser Pro Thr Gly Gly Ala Ala  
 20 25 30

Ala Asp His Ala Asp Glu Asn Asn Glu Ser Gly Gly Gly Glu Pro Arg  
 35 40 45

Glu Gly Ala Val Val Ala Ala Pro Asn Arg Arg Pro Arg Gly Arg Pro  
 50 55 60

Pro Gly Ser Lys Asn Lys Pro Lys Pro Pro Ile Phe Val Thr Arg Asp  
 65 70 75 80

Ser Pro Asn Ala Leu Arg Ser His Val Met Glu Val Ala Gly Gly Ala  
 85 90 95

MBI0034CIP.ST25.txt

Asp Val Ala Asp Ala Ile Ala Gln Phe Ser Arg Arg Arg Gln Arg Gly  
100 105 110

Val Cys Val Leu Ser Gly Ala Gly Thr Val Ala Asn Val Ala Leu Arg  
115 120 125

Gln Pro Ser Ala Pro Gly Ala Val Val Ala Leu His Gly Arg Phe Glu  
130 135 140

Ile Leu Ser Leu Thr Gly Thr Phe Leu Pro Gly Pro Ala Pro Pro Gly  
145 150 155 160

Ser Thr Gly Leu Thr Val Tyr Leu Ala Gly Gly Gln Gly Gln Val Val  
165 170 175

Gly Gly Ser Val Val Gly Ser Leu Ile Ala Ala Gly Pro Val Met Val  
180 185 190

Ile Ala Ser Thr Phe Ala Asn Ala Thr Tyr Glu Arg Leu Pro Leu Glu  
195 200 205

Glu Glu Glu Glu Gly Ser Gly Pro Pro Met Pro Gly Gly Ala Glu Pro  
210 215 220

Leu Met Ala Gly Gly His Gly Ile Ala Asp Pro Ser Ala Leu Pro Met  
225 230 235 240

Phe Asn Leu Pro Pro Ser Asn Gly Leu Gly Gly Gly Gly Asp Gly Phe  
245 250 255

Pro Trp Ala Ala His Pro Arg Pro Pro Tyr  
260 265

<210> 23  
<211> 1153  
<212> DNA  
<213> Glycine max

<220>  
<223> G3458

<400> 23  
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ctctttccct tccaacctca tccattccg ttttctctgc agtactcaat tgatcccttt 120  
gtttttctat tcgttctgag agctttgtgt gtatggccgg catagacttg gggttcagcat 180  
cacattttgt tcatcatcgc cttgaacgcc ctgaccttga agacgatgag aaccaacaag 240  
accaagacaa caaccttaac aatcacgaag ggcttgacct agttacacca aattcaggtc 300

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ctggtgatgt tgttggtcgc aggccaagag gaagacctcc aggttcaaag aacaagccaa 360
aaccaccagt tatcatcaca agagagagtg caaacaccct taggggtcac atccttgaag 420
ttagtagtgg ttgtgacgtc tttgaatcgg tcgctaccta tgcaaggaag cgacaaagag 480
ggatctgtgt cctcagtggg agtggcaccg tgaccaacgt gacattgagg cagccggccg 540
cggctggtgc cgtcgtcacg ctgcacggaa ggtttgagat cctctctttg tcaggatcat 600
tcctcccacc tccagctcca ccaggtgcta caagtttgac tgtgttcctt ggtggaggac 660
agggtcaagt ggtgggagga aatgttggtt gtcctttggt ggcttctggg cctgttattg 720
ttattgcttc atcttttact aatgtagcat atgagagggt gcctttggat gaagatgaat 780
ctatgcagat gcaacaaggg caatcatcag ctggtgatgg tagcggtgac catggtggtg 840
gagttagtaa taactctttt ccggatccgt cttccgggct tccattcttc aatttgccac 900
taaacatgcc tcagttacct gttgatgggt gggctggcaa ctctggtgga aggcaatctt 960
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gtcttctcta atctttcttc tgaatattgc ttgtgaagaa gtactgattt ttctattgaa 1080
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aacgttttct ctt 1153

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<210> 24  
 <211> 270  
 <212> PRT  
 <213> Glycine max

<220>  
 <223> G3458 polypeptide

<400> 24

Met Ala Gly Ile Asp Leu Gly Ser Ala Ser His Phe Val His His Arg  
 1 5 10 15

Leu Glu Arg Pro Asp Leu Glu Asp Asp Glu Asn Gln Gln Asp Gln Asp  
 20 25 30

Asn Asn Leu Asn Asn His Glu Gly Leu Asp Leu Val Thr Pro Asn Ser  
 35 40 45

Gly Pro Gly Asp Val Val Gly Arg Arg Pro Arg Gly Arg Pro Pro Gly  
 50 55 60

Ser Lys Asn Lys Pro Lys Pro Pro Val Ile Ile Thr Arg Glu Ser Ala  
 65 70 75 80

MBI0034CIP.ST25.txt

Asn Thr Leu Arg Ala His Ile Leu Glu Val Ser Ser Gly Cys Asp Val  
85 90 95

Phe Glu Ser Val Ala Thr Tyr Ala Arg Lys Arg Gln Arg Gly Ile Cys  
100 105 110

Val Leu Ser Gly Ser Gly Thr Val Thr Asn Val Thr Leu Arg Gln Pro  
115 120 125

Ala Ala Ala Gly Ala Val Val Thr Leu His Gly Arg Phe Glu Ile Leu  
130 135 140

Ser Leu Ser Gly Ser Phe Leu Pro Pro Pro Ala Pro Pro Gly Ala Thr  
145 150 155 160

Ser Leu Thr Val Phe Leu Gly Gly Gly Gln Gly Gln Val Val Gly Gly  
165 170 175

Asn Val Val Gly Pro Leu Val Ala Ser Gly Pro Val Ile Val Ile Ala  
180 185 190

Ser Ser Phe Thr Asn Val Ala Tyr Glu Arg Leu Pro Leu Asp Glu Asp  
195 200 205

Glu Ser Met Gln Met Gln Gln Gly Gln Ser Ser Ala Gly Asp Gly Ser  
210 215 220

Gly Asp His Gly Gly Gly Val Ser Asn Asn Ser Phe Pro Asp Pro Ser  
225 230 235 240

Ser Gly Leu Pro Phe Phe Asn Leu Pro Leu Asn Met Pro Gln Leu Pro  
245 250 255

Val Asp Gly Trp Ala Gly Asn Ser Gly Gly Arg Gln Ser Tyr  
260 265 270

<210> 25  
<211> 918  
<212> DNA  
<213> Oryza sativa

<220>  
<223> G3406

<400> 25  
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caccgccgacc tccagctgca gcacagctac gccaaagcagc acgagccgctc cgacgacgac 120  
cccaacggca gcggcgggcg cggaacagc aacggcgggc cgtacgggga ccatgacggc 180

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gggtcctcgt cgtcagggtcc tgccaccgac ggcgcgggtcg gcggggcccgg cgacgtggtg 240
gcgcgccggc cgcgggggcg cccgcctggc tccaagaaca agccgaagcc gccggtgatc 300
atcacgcggg agagcgccaa cacgtcgcgc gcccacatcc tggaggtcgg gagcggtcgc 360
gacgtgttcg agtgcgcttc cacgtacgcg cgccggcggc agcgcggcgt gtgcgtgctg 420
agcggcagcg gcgtgggtcac caacgtgacg ctgcgtcagc cgtcggcgcc cgcgggcgcc 480
gtcgtgtcgc tgcacgggag gttcgagatc ctgtcgtctt cgggctcctt cctcccgcgg 540
ccggctcccc ccggcgccac cagcctcacc atcttcctcg ccggggggcca gggacaggtc 600
gtcggcgggc acgtcgtcgg cgcgctctac gccgcgggcc cggtcatcgt catcgcgggc 660
tccttcgcca acgtcgcta cgagcgctc cactggagg aggaggagg gccgccgcgg 720
caggccggcc tgcagatgca gcagcccggc ggcggcgccg atgctggtgg catgggtggc 780
gcgttcccgc cggaccgctc tgccgccggc ctcccgttct tcaacctgcc gctcaacaac 840
atgcccggtg gcggcggtc acagctccct cccggcgccg acggccatgg ctgggccggc 900
gcacggccac cgttctga 918

```

```

<210> 26
<211> 305
<212> PRT
<213> Oryza sativa

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```

<220>
<223> G3406 polypeptide

```

```

<400> 26

```

```

Met Ala Gly Leu Asp Leu Gly Thr Ala Ala Thr Arg Tyr Val His Gln
1          5          10          15

```

```

Leu His His Leu His Pro Asp Leu Gln Leu Gln His Ser Tyr Ala Lys
20          25          30

```

```

Gln His Glu Pro Ser Asp Asp Asp Pro Asn Gly Ser Gly Gly Gly Gly
35          40          45

```

```

Asn Ser Asn Gly Gly Pro Tyr Gly Asp His Asp Gly Gly Ser Ser Ser
50          55          60

```

```

Ser Gly Pro Ala Thr Asp Gly Ala Val Gly Gly Pro Gly Asp Val Val
65          70          75          80

```

```

Ala Arg Arg Pro Arg Gly Arg Pro Pro Gly Ser Lys Asn Lys Pro Lys
85          90          95

```

MBI0034CIP.ST25.txt

Pro Pro Val Ile Ile Thr Arg Glu Ser Ala Asn Thr Leu Arg Ala His  
100 105 110

Ile Leu Glu Val Gly Ser Gly Cys Asp Val Phe Glu Cys Val Ser Thr  
115 120 125

Tyr Ala Arg Arg Arg Gln Arg Gly Val Cys Val Leu Ser Gly Ser Gly  
130 135 140

Val Val Thr Asn Val Thr Leu Arg Gln Pro Ser Ala Pro Ala Gly Ala  
145 150 155 160

Val Val Ser Leu His Gly Arg Phe Glu Ile Leu Ser Leu Ser Gly Ser  
165 170 175

Phe Leu Pro Pro Pro Ala Pro Pro Gly Ala Thr Ser Leu Thr Ile Phe  
180 185 190

Leu Ala Gly Gly Gln Gly Gln Val Val Gly Gly Asn Val Val Gly Ala  
195 200 205

Leu Tyr Ala Ala Gly Pro Val Ile Val, Ile Ala Ala Ser Phe Ala Asn  
210 215 220

Val Ala Tyr Glu Arg Leu Pro Leu Glu Glu Glu Glu Ala Pro Pro Pro  
225 230 235 240

Gln Ala Gly Leu Gln Met Gln Gln Pro Gly Gly Gly Ala Asp Ala Gly  
245 250 255

Gly Met Gly Gly Ala Phe Pro Pro Asp Pro Ser Ala Ala Gly Leu Pro  
260 265 270

Phe Phe Asn Leu Pro Leu Asn Asn Met Pro Gly Gly Gly Gly Ser Gln  
275 280 285

Leu Pro Pro Gly Ala Asp Gly His Gly Trp Ala Gly Ala Arg Pro Pro  
290 295 300

Phe  
305

<210> 27  
<211> 951  
<212> DNA  
<213> Oryza sativa  
<220>

<223> G3405

<400> 27

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tcagaacggc gccgggaggc caccgccggc tccagggttc catccgtagg cggcttccgg      60
cggcagctgc acgtttccga gtaggtttgg tggtagtctt tggaagaggc ttggatcgac    120
ggccccgccg gcgagctgcg ccgcttgctg ccccgaggcg agcaaccagc cgctgtcggc    180
ttgcccttga gccgccagta gctcgtcgtc ctccaacggc agccgctcgt acaccgcgtt    240
cgcaaaagac gccgccatta tcaccacagg cccagccgcg gtcagcgcgc cgacgacgct    300
gccgcccacg acctggccct ggccctccggc caggtagacg gtgagccccg tggcctccgg    360
cgggggcggg gccgggagga aggagccgga gagggagagt atctcgaacc ggccgtggag    420
cgcaacgacc gtcctctgcg atgcgggctg ccgcagcgtg acgttagtga cggtgccggc    480
gccgctgagc acgcaaacc cgcgctgccg gcgtcgcgcg aacgtggtga tgctctcgga    540
gatgtcgcag ccgccggcca cctccatgac gtgcgtccgg agcgtgttgg cgctgtccct    600
gggtgatgatg atcgggtggct tcggcttggt cttggacccc gccgggagtc ccctcgggag    660
gcgcgtggcg ctctcgtcc cggcgccgtc cggcccgcca cccgaggggg gtaccagcgc    720
gaggtcaccg ccgtcaccac cgcttccatg gccgttgcca ctgttctcgt cgtcgtcgtg    780
gtcgcgcttg gtgccgcggc tgccgaagac acccgagagt ccgccgcctt ggtcatcctc    840
ggctcttgaga tgcagctggt gctgctgctg ctggagatgg tgatggaagt cgcgggtggt    900
gaacgggtgga ggaagatggt gaccgtgtat tgatgccgtg accggatcca t          951

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<210> 28

<211> 316

<212> PRT

<213> Oryza sativa

<220>

<223> G3405 polypeptide

<400> 28

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Met Asp Pro Val Thr Ala Ser Ile His Gly His His Leu Pro Pro Pro
1          5          10          15

Phe Asn Thr Arg Asp Phe His His His Leu Gln Gln Gln Gln His Gln
          20          25          30

Leu His Leu Lys Thr Glu Asp Asp Gln Gly Gly Gly Thr Pro Gly Val
          35          40          45

Phe Gly Ser Arg Gly Thr Lys Arg Asp His Asp Asp Asp Glu Asn Ser
          50          55          60

```

MBI0034CIP.ST25.txt

Gly Asn Gly His Gly Ser Gly Gly Asp Gly Gly Asp Leu Ala Leu Val  
65 70 75 80

Pro Pro Ser Gly Gly Gly Pro Asp Gly Ala Gly Ser Glu Ser Ala Thr  
85 90 95

Arg Arg Pro Arg Gly Arg Pro Ala Gly Ser Lys Asn Lys Pro Lys Pro  
100 105 110

Pro Ile Ile Ile Thr Arg Asp Ser Ala Asn Thr Leu Arg Thr His Val  
115 120 125

Met Glu Val Ala Gly Gly Cys Asp Ile Ser Glu Ser Ile Thr Thr Phe  
130 135 140

Ala Arg Arg Arg Gln Arg Gly Val Cys Val Leu Ser Gly Ala Gly Thr  
145 150 155 160

Val Thr Asn Val Thr Leu Arg Gln Pro Ala Ser Gln Gly Ala Val Val  
165 170 175

Ala Leu His Gly Arg Phe Glu Ile Leu Ser Leu Ser Gly Ser Phe Leu  
180 185 190

Pro Pro Pro Ala Pro Pro Glu Ala Thr Gly Leu Thr Val Tyr Leu Ala  
195 200 205

Gly Gly Gln Gly Gln Val Val Gly Gly Ser Val Val Gly Ala Leu Thr  
210 215 220

Ala Ala Gly Pro Val Val Ile Met Ala Ala Ser Phe Ala Asn Ala Val  
225 230 235 240

Tyr Glu Arg Leu Pro Leu Glu Asp Asp Glu Leu Leu Ala Ala Gln Gly  
245 250 255

Gln Ala Asp Ser Ala Gly Leu Leu Ala Ala Gly Gln Gln Ala Ala Gln  
260 265 270

Leu Ala Gly Gly Ala Val Asp Pro Ser Leu Phe Gln Gly Leu Pro Pro  
275 280 285

Asn Leu Leu Gly Asn Val Gln Leu Pro Pro Glu Ala Ala Tyr Gly Trp  
290 295 300

Asn Pro Gly Ala Gly Gly Gly Arg Pro Ala Pro Phe  
305 310 315



<210> 29  
 <211> 969  
 <212> DNA  
 <213> Oryza sativa

<220>  
 <223> G3400

<400> 29  
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 aagttgctgc tgctgctgct ggtaggatcc cacatggcct ccaagataca tgccgagacc 120  
 gccgccgccg ccgccgtcac cggcgggtcac ctcagaggac tgcgaggctg tgggctgctg 180  
 ctgcggtggt ggtgggcccgg ttggtgctgcgc cgcctcgccg ggaggggtgg cggcggcagc 240  
 ctctgcctcc ggatcctccc catcgagtgg cagacgctcg tagacggcat tggcgaacga 300  
 ggcggccatg aggaagactg gccccgcggc gatgagctgg ccggccacgc tcccgcgcgac 360  
 cacctggccc tgcccgcggg agaggaagac ggtgaggccg ctggcgctgg gggcgcgggg 420  
 cggcgggagg acggtgcccg tgagggacag gatctcgaac tggccgcgca tgggtggcgac 480  
 caggctgccc gggggcgacg cgcttggtg gcgagcgcg acgttggcga cggcgccgcc 540  
 accgctgagc acggagacgc cgcggccgcg gcggcgcgcg aactcgcaga cgcactcgac 600  
 gatgtcggtt cccgcggcga cctcgaggac gtgggagtgg aacgcgttgg ggctgtcccg 660  
 cgtcacgatg atgggcggct tgggcttggt cttggagccc agcggcctcc cgcgggggcg 720  
 ccgcatcggg ccacccgaac cgctgccgcc gccgctgtcc tccgccgcca ccatggccga 780  
 cgacgtcggg tggtcgatc ctaggtcggc gtccgcgccg gggctctcat ccggcgacag 840  
 catggaccgc tccgccttga cgtcacctgc cggggacagt ggctggtgct gctgcgcgcg 900  
 gagcatgtgt aggtagtgcg ccgccacgcc gccgccgcca ccgccgccg tgggatccat 960  
 cccggccat 969

<210> 30  
 <211> 322  
 <212> PRT  
 <213> Oryza sativa

<220>  
 <223> G3400 polypeptide

<400> 30

Met Ala Gly Met Asp Pro Thr Gly Gly Gly Gly Gly Gly Val Ala  
 1 5 10 15

Ala His Tyr Leu His Met Leu Arg Ala Gln Gln His Gln Pro Leu Ser  
 20 25 30

Pro Ala Gly Asp Val Lys Ala Glu Arg Ser Met Leu Ser Pro Asp Glu  
35 40 45

Ser Pro Gly Ala Asp Ala Asp Leu Gly Ser Asp His Pro Thr Ser Ser  
50 55 60

Ala Met Val Ala Ala Glu Asp Ser Gly Gly Gly Ser Gly Ser Gly Gly  
65 70 75 80

Pro Met Arg Arg Pro Arg Gly Arg Pro Leu Gly Ser Lys Asn Lys Pro  
85 90 95

Lys Pro Pro Ile<sup>1</sup> Ile Val Thr Arg Asp Ser Pro Asn Ala Phe His Ser  
100 105 110

His Val Leu Glu Val Ala Ala Gly Thr Asp Ile Val Glu Cys Val Cys  
115 120 125

Glu Phe Ala Arg Arg Arg Gly Arg Gly Val Ser Val Leu Ser Gly Gly  
130 135 140

Gly Ala Val Ala Asn Val Ala Leu Arg Gln Pro Gly Ala Ser Pro Pro  
145 150 155 160

Gly Ser Leu Val Ala Thr Met Arg Gly Gln Phe Glu Ile Leu Ser Leu  
165 170 175

Thr Gly Thr Val Leu Pro Pro Pro Ala Pro Pro Ser Ala Ser Gly Leu  
180 185 190

Thr Val Phe Leu Ser Gly Gly Gln Gly Gln Val Val Gly Gly Ser Val  
195 200 205

Ala Gly Gln Leu Ile Ala Ala Gly Pro Val Phe Leu Met Ala Ala Ser  
210 215 220

Phe Ala Asn Ala Val Tyr Glu Arg Leu Pro Leu Asp Gly Glu Asp Pro  
225 230 235 240

Glu Ala Glu Ala Ala Ala Thr Pro Pro Gly Asp Ala Ala Gln Pro  
245 250 255

Thr Gly Pro Pro Pro Pro Gln Gln Gln Pro Thr Ala Ser Gln Ser Ser  
260 265 270

MBI0034CIP.ST25.txt

Glu Val Thr Ala Gly Asp Gly Gly Gly Gly Gly Gly Leu Gly Met Tyr  
275 280 285

Leu Gly Gly His Val Gly Ser Tyr Gln Gln Gln Gln Gln Gln Leu Pro  
290 295 300

Gly Pro Gly Asp Asn Phe Gly Ser Trp Ser Gly Ser Ile Arg Pro Pro  
305 310 315 320

Pro Phe

<210> 31  
<211> 987  
<212> DNA  
<213> Oryza sativa

<220>  
<223> G3404

<400> 31  
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ggagcgccac cgggtggcggc gttccaccac caccggttcc accacggcgg cggggcgcac 120  
tacccggcgg cgttcagca gtttcaggag gaggcagc agcttggtggc ggcggcggcg 180  
gcggtggtg ggatggcgaa gcaggagctg gtggatgaga gcaacaacac catcaacagc 240  
ggcgggagca acgggagcgg cggggaggag cagaggcagc agtccgggga ggagcagcac 300  
cagcaagggg cggcggcgcc ggtggtgatc cggcggtcca ggggcccgc cgcgggtccc 360  
aagaacaagc ccaagcctcc ggtcatcatc acgcgcgaca gcgccagcgc gctgcgggcg 420  
cacgtcctcg aggtcgctc cgggtgcgac ctgctcgaca gcgtcgccac gttcgcgcg 480  
cgccgccagg tcggtgtctg cgtgctcagc gccaccggcg ccgtcaccaa cgtctccgtc 540  
cggcagcccc gcgcgggccc cggcgccgtc gtcaacctca ccggccgctt cgacatcctc 600  
tcgctgtccg gtccttctc cccgcgcgcg gcgcctccct ccgccaccgg cctcaccgtc 660  
tacgtctccg gcggccaggg gcaggctcgt ggcggcacgg tcgccggacc gctcatcgcc 720  
gtcgcccccg tcgtcatcat ggccgcctcg ttcgggaacg ccgcctacga gcgcctcccc 780  
ctcgaggagc acgagccgcc gcagcacatg gcgggcggcg gccagtcctc gccgcgcgcg 840  
ccgccgctgc cattaccacc acaccagcag ccgattcttc aagaccatct gccacacaac 900  
ctgatgaacg gaatccacct ccccggcgac gccgcctacg gctggaccag cggcggcggc 960  
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<210> 32  
<211> 328

<212> PRT

<213> Oryza sativa

<220>

<223> G3404 polypeptide

<400> 32

Met Asp Pro Val Thr Ala Ala Ala Ala His Gly Gly Gly His His His  
1 5 10 15

His His His Phe Gly Ala Pro Pro Val Ala Ala Phe His His His Pro  
20 25 30

Phe His His Gly Gly Gly Ala His Tyr Pro Ala Ala Phe Gln Gln Phe  
35 40 45

Gln Glu Glu Gln Gln Gln Leu Val Ala Ala Ala Ala Ala Ala Gly Gly  
50 55 60

Met Ala Lys Gln Glu Leu Val Asp Glu Ser Asn Asn Thr Ile Asn Ser  
65 70 75 80

Gly Gly Ser Asn Gly Ser Gly Gly Glu Glu Gln Arg Gln Gln Ser Gly  
85 90 95

Glu Glu Gln His Gln Gln Gly Ala Ala Ala Pro Val Val Ile Arg Arg  
100 105 110

Pro Arg Gly Arg Pro Ala Gly Ser Lys Asn Lys Pro Lys Pro Pro Val  
115 120 125

Ile Ile Thr Arg Asp Ser Ala Ser Ala Leu Arg Ala His Val Leu Glu  
130 135 140

Val Ala Ser Gly Cys Asp Leu Val Asp Ser Val Ala Thr Phe Ala Arg  
145 150 155 160

Arg Arg Gln Val Gly Val Cys Val Leu Ser Ala Thr Gly Ala Val Thr  
165 170 175

Asn Val Ser Val Arg Gln Pro Gly Ala Gly Pro Gly Ala Val Val Asn  
180 185 190

Leu Thr Gly Arg Phe Asp Ile Leu Ser Leu Ser Gly Ser Phe Leu Pro  
195 200 205

Pro Pro Ala Pro Pro Ser Ala Thr Gly Leu Thr Val Tyr Val Ser Gly  
210 215 220

Gly Gln Gly Gln Val Val Gly Gly Thr Val Ala Gly Pro Leu Ile Ala  
225 230 235 240

Val Gly Pro Val Val Ile Met Ala Ala Ser Phe Gly Asn Ala Ala Tyr  
245 250 255

Glu Arg Leu Pro Leu Glu Asp Asp Glu Pro Pro Gln His Met Ala Gly  
260 265 270

Gly Gly Gln Ser Ser Pro Pro Pro Pro Pro Leu Pro Leu Pro Pro His  
275 280 285

Gln Gln Pro Ile Leu Gln Asp His Leu Pro His Asn Leu Met Asn Gly  
290 295 300

Ile His Leu Pro Gly Asp Ala Ala Tyr Gly Trp Thr Ser Gly Gly Gly  
305 310 315 320

Gly Gly Gly Arg Ala Ala Pro Tyr  
325

<210> 33  
<211> 870  
<212> DNA  
<213> Oryza sativa

<220>  
<223> G3407

<400> 33  
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cattggcggc atcccgaacg gcatgttgaa gaacgggagc ccaccggtgg cggcgccgcc 120  
cgacggatca acgcctaata gtggcatgcc gccgctgccg ccgccgccct ggtcgctccc 180  
tgccggcgcc ggggggacca cctcgctgcc gtcctcgagc ggcagcctct cgtacgccac 240  
gttgctgaac gacgcggcga cgacgacgac gggccccgcc gcgatgagcg cgccggcgac 300  
gctgccaccg acgacctgcc cctgccccgcc ggcgaggaac gcggcgaggc tgggtggcgcc 360  
cggcggcgcg ggcgggggca ggaaggagcc cgcgaggag agtatctcga acctgccgtg 420  
cagcgtcgcc accgccggcg aggcggcccc gggtcgcgcc gactgcggct gccggagcgt 480  
gacgttcgcc actgtccccg ccgccgagag cacgcacacc ccgcgctgcc ggcggcgcg 540  
gtacgccgtc agcgctcga acacatcgca accggcggt acctcgagga tatgcgcct 600  
gagcgcgttg gcgctctccc tggatgat caccggcggc ttgggcttgt tcttgagacc 660  
cggcggcgcg ccgcgggggc ggcgagcgac gacctcgccg ccgccgatcc cggcgccacc 720

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ggccgtgctg ctgggcccgc cgccaccgcc gctccccggc gagaggctcg cgtggccgcc      780
gtcgtcggag ccggcgccgc catcgtcgtg gcggagatgc agtgattggt ggtggtggag      840
gtagctggtg cccaaatcaa ggctgccat                                          870
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<210> 34
<211> 289
<212> PRT
<213> Oryza sativa
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```
<220>
<223> G3407 polypeptide
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```
<400> 34
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Met Ala Gly Leu Asp Leu Gly Thr Ser Tyr Leu His His His Gln Ser
1              5              10              15
```

```
Leu His Leu Arg His Asp Asp Gly Gly Ala Gly Ser Asp Asp Gly Gly
                20              25              30
```

```
His Asp Asp Leu Ser Pro Gly Ser Gly Gly Gly Gly Gly Pro Ser Ser
          35              40              45
```

```
Thr Ala Gly Gly Ala Gly Ile Gly Gly Gly Glu Val Val Ala Arg Arg
          50              55              60
```

```
Pro Arg Gly Arg Pro Pro Gly Ser Lys Asn Lys Pro Lys Pro Pro Val
65              70              75              80
```

```
Ile Ile Thr Arg Glu Ser Ala Asn Ala Leu Arg Ala His Ile Leu Glu
          85              90              95
```

```
Val Ala Ala Gly Cys Asp Val Phe Glu Ala Leu Thr Ala Tyr Ala Arg
          100             105             110
```

```
Arg Arg Gln Arg Gly Val Cys Val Leu Ser Ala Ala Gly Thr Val Ala
          115             120             125
```

```
Asn Val Thr Leu Arg Gln Pro Gln Ser Ala Gln Pro Gly Pro Ala Ser
          130             135             140
```

```
Pro Ala Val Ala Thr Leu His Gly Arg Phe Glu Ile Leu Ser Leu Ala
145             150             155             160
```

```
Gly Ser Phe Leu Pro Pro Pro Ala Pro Pro Gly Ala Thr Ser Leu Ala
          165             170             175
```

Ala Phe Leu Ala Gly Gly Gln Gly Gln Val Val Gly Gly Ser Val Ala  
180 185 190

Gly Ala Leu Ile Ala Ala Gly Pro Val Val Val Val Ala Ala Ser Phe  
195 200 205

Ser Asn Val Ala Tyr Glu Arg Leu Pro Leu Glu Asp Gly Asp Glu Val  
210 215 220

Val Pro Pro Ala Pro Ala Gly Ser Asp Gln Gly Gly Gly Gly Ser Gly  
225 230 235 240

Gly Met Pro Pro Leu Gly Val Asp Pro Ser Gly Gly Ala Ala Thr Gly  
245 250 255

Gly Leu Pro Phe Phe Asn Met Pro Phe Gly Met Pro Pro Met Pro Val  
260 265 270

Asp Gly His Ala Gly Trp Pro Gly Ala Gly Val Gly Arg Pro Pro Phe  
275 280 285

Ser

<210> 35  
<211> 1035  
<212> DNA  
<213> Glycine max

<220>  
<223> G3462

<400> 35  
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agcagggata acggagagga ccagaaccaa aacctcggca gccacgaagg gtcggagccc 120  
ggaagcagcg gtcggaggcc acgtggcagg ccagcgggggt ccaagaacaa gcccaagccg 180  
cccatagtca taattttttt aagccccaac gcgctccgaa gccacgtcct ggaaatcgcc 240  
tccggcccgcg atgtcgccga gagcatcgcc gccttcgccca accgccgccca ccgtggcggtg 300  
tcggtcctca gcgggagtgg cattgtagcc aacgtcactc tccgccagcc cgccgcccc 360  
gccggcgctca taaccctcca cgggaggttc gagatactct ccctctcggg tgcctttttg 420  
ccgtccccct cgccgtccgg cgccaccgga ctgaccgtct acctagccgg cgggcagggg 480  
caggttgctg gcggcaacgt ggcgggctct ctcgctgcct ccggaccggt gatggtgatc 540  
gccgccactt tcgctaattgc cacttatgag aggttgacctc tggaggatga tcaaggtgag 600  
gaggaaatgc aagtgcagca gcagcagcag cagcagcaac agcagcagca gcagcagcag 660

MBI0034CIP.ST25.txt

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caacaacaat ctcaagggttt gggggaacag gtttcaatgc ctatgtataa tttgcctcct 720
aatttgctac acaatgggtca gaacatgcct catgatgtgt tctggggagc tccacctcgc 780
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 <213> Glycine max

<220>  
 <223> G3462 polypeptide

<400> 36

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 20 25 30

Gly Ser His Glu Gly Ser Glu Pro Gly Ser Ser Gly Arg Arg Pro Arg  
 35 40 45

Gly Arg Pro Ala Gly Ser Lys Asn Lys Pro Lys Pro Pro Ile Val Ile  
 50 55 60

Ile Phe Leu Ser Pro Asn Ala Leu Arg Ser His Val Leu Glu Ile Ala  
 65 70 75 80

Ser Gly Arg Asp Val Ala Glu Ser Ile Ala Ala Phe Ala Asn Arg Arg  
 85 90 95

His Arg Gly Val Ser Val Leu Ser Gly Ser Gly Ile Val Ala Asn Val  
 100 105 110

Thr Leu Arg Gln Pro Ala Ala Pro Ala Gly Val Ile Thr Leu His Gly  
 115 120 125

Arg Phe Glu Ile Leu Ser Leu Ser Gly Ala Phe Leu Pro Ser Pro Ser  
 130 135 140



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Pro Ser Gly Ala Thr Gly Leu Thr Val Tyr Leu Ala Gly Gly Gln Gly  
145 150 155 160

Gln Val Val Gly Gly Asn Val Ala Gly Ser Leu Val Ala Ser Gly Pro  
165 170 175

Val Met Val Ile Ala Ala Thr Phe Ala Asn Ala Thr Tyr Glu Arg Leu  
180 185 190

Pro Leu Glu Asp Asp Gln Gly Glu Glu Glu Met Gln Val Gln Gln Gln  
195 200 205

Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Ser  
210 215 220

Gln Gly Leu Gly Glu Gln Val Ser Met Pro Met Tyr Asn Leu Pro Pro  
225 230 235 240

Asn Leu Leu His Asn Gly Gln Asn Met Pro His Asp Val Phe Trp Gly  
245 250 255

Ala Pro Pro Arg Pro Pro Pro Ser Phe  
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gcgctgcgca gccacgtcat ggaggtggcc ggcgggcgcc atgtcgccga gtccatcgcg 240  
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gacgtggccc tgcgccagcc ggccgcgccc agcgccgtgg tggcgctccg tgggcgggttc 360  
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 <212> PRT  
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<220>  
 <223> G3401 polypeptide

<400> 38

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Arg Asn Arg Arg Pro Arg Gly Arg Pro Pro Gly Ser Lys Asn Lys Pro  
 35 40 45

Lys Pro Pro Ile Phe Val Thr Arg Asp Ser Pro Asn Ala Leu Arg Ser  
 50 55 60

His Val Met Glu Val Ala Gly Gly Ala Asp Val Ala Glu Ser Ile Ala  
 65 70 75 80

His Phe Ala Arg Arg Arg Gln Arg Gly Val Cys Val Leu Ser Gly Ala  
 85 90 95

Gly Thr Val Thr Asp Val Ala Leu Arg Gln Pro Ala Ala Pro Ser Ala  
 100 105 110

Val Val Ala Leu Arg Gly Arg Phe Glu Ile Leu Ser Leu Thr Gly Thr  
 115 120 125

Phe Leu Pro Gly Pro Ala Pro Pro Gly Ser Thr Gly Leu Thr Val Tyr  
 130 135 140

Leu Ala Gly Gly Gln Gly Gln Val Val Gly Gly Ser Val Val Gly Thr  
 145 150 155 160

Leu Thr Ala Ala Gly Pro Val Met Val Ile Ala Ser Thr Phe Ala Asn  
 165 170 175

Ala Thr Tyr Glu Arg Leu Pro Leu Asp Gln Glu Glu Glu Glu Ala Ala  
 180 185 190

Ala Gly Gly Met Met Ala Pro Pro Pro Leu Met Ala Gly Ala Ala Asp  
195 200 205

Pro Leu Leu Phe Gly Gly Gly Met His Asp Ala Gly Leu Ala Ala Trp  
210 215 220

His His Ala Arg Pro Pro Pro Pro Pro Tyr  
225 230 235

<210> 39  
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<220>  
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<220>  
<223> G3556

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cgtctgctgg acggcgggcgt acatcgggcg gggcacgacg gcgcctccgc tgctctgctg 360  
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gcccgcgcgc atcagctccc ccatgacgct cccaccacc acccgcccct gcccgcgggc 540  
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acaatctagc ttctccacgc caatcgctga agccagcgtc gctcccgtct ccaagcaaaa 1140  
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<211> 258  
<212> PRT  
<213> Oryza sativa

<220>  
<223> G3556 polypeptide

<400> 40

Met Gly Ser Ile Asp Gly His Ser Leu Gln Gln His Gln Gly Tyr Ser  
1 5 10 15

His Gly Gly Gly Ala Gly Gly Ser Asn Glu Glu Glu Glu Ala Ser Pro  
20 25 30

Pro Pro Gly Gly Gly Ser Ala Thr Gly Ser Ala Gly Arg Arg Pro Arg  
35 40 45

Gly Arg Pro Pro Gly Ser Lys Asn Lys Pro Lys Pro Pro Val Val Val  
50 55 60

Thr Arg Glu Ser Pro Asn Ala Met Arg Ser His Val Leu Glu Ile Ala  
65 70 75 80

Ser Gly Ala Asp Ile Val Glu Ala Ile Ala Gly Phe Ser Arg Arg Arg  
85 90 95

Gln Arg Gly Val Ser Val Leu Ser Gly Ser Gly Ala Val Thr Asn Val  
100 105 110

Thr Leu Arg Gln Pro Ala Gly Thr Gly Ala Ala Ala Val Ala Leu Arg  
115 120 125

Gly Arg Phe Glu Ile Leu Ser Met Ser Gly Ala Phe Leu Pro Ala Pro  
130 135 140

Ala Pro Pro Gly Ala Thr Gly Leu Ala Val Tyr Leu Ala Gly Gly Gln  
145 150 155 160

Gly Gln Val Val Gly Gly Ser Val Met Gly Glu Leu Ile Ala Ser Gly  
165 170 175

Pro Val Met Val Ile Ala Ala Thr Phe Gly Asn Ala Thr Tyr Glu Arg  
180 185 190

Leu Pro Leu Asp Gln Glu Gly Glu Glu Gly Ala Val Leu Ser Gly Ser  
195 200 205

Glu Gly Ala Ala Ala Gln Met Glu Gln Gln Ser Ser Gly Gly Ala Val  
210 215 220

Val Pro Pro Pro Met Tyr Ala Ala Val Gln Gln Thr Pro Pro His Asp  
225 230 235 240

Met Phe Gly Gln Trp Gly His Ala Ala Val Ala Arg Pro Pro Pro Thr  
245 250 255

Ser Phe

<210> 41  
<211> 1116  
<212> DNA  
<213> Arabidopsis thaliana

<220>  
<223> G1069

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agacgaagaa gatgatccta gagaaggagc cggtgaggtg gtcaaccgta gaccaagagg 300  
tagaccacca ggatccaaaa acaaacccaa agctccaatc tttgtgacaa gagacagccc 360  
caacgcactc cgtagccatg tcttgagat ctccgacggc agtgacgtcg ccgacacaat 420  
cgctcacttc tcaagacgca ggcaacgcgg cggttgcggt ctcagcggga caggctcagt 480  
cgctaacgtc accctccgcc aagccgccgc accaggaggt gtggtctctc tccaaggcag 540  
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cgggtttaacg gtttacttag ccgggggtcca gggtcaggtc gttggaggta gcgttgtagg 660  
cccactctta gccatagggt cggtcatggt gattgctgct actttctcta acgctactta 720  
tgagagattg cccatggaag aagaggaaga cggtggcggc tcaagacaga ttcacggagg 780  
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atatacatgg gtccacgcaa gaccacctta ctgactcagt gagccatttc tatatataat 960

gggtctatata aataaatata tagatgaata taagcaagca atttgaggta gtctattaca 1020  
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aatatagagc ttgggaaggt agaaagagac gacatt 1116

<210> 42  
<211> 281  
<212> PRT  
<213> Arabidopsis thaliana

<220>  
<223> G1069 polypeptide

<400> 42

Met Ala Asn Pro Trp Trp Thr Asn Gln Ser Gly Leu Ala Gly Met Val  
1 5 10 15

Asp His Ser Val Ser Ser Gly His His Gln Asn His His His Gln Ser  
20 25 30

Leu Leu Thr Lys Gly Asp Leu Gly Ile Ala Met Asn Gln Ser Gln Asp  
35 40 45

Asn Asp Gln Asp Glu Glu Asp Asp Pro Arg Glu Gly Ala Val Glu Val  
50 55 60

Val Asn Arg Arg Pro Arg Gly Arg Pro Pro Gly Ser Lys Asn Lys Pro  
65 70 75 80

Lys Ala Pro Ile Phe Val Thr Arg Asp Ser Pro Asn Ala Leu Arg Ser  
85 90 95

His Val Leu Glu Ile Ser Asp Gly Ser Asp Val Ala Asp Thr Ile Ala  
100 105 110

His Phe Ser Arg Arg Arg Gln Arg Gly Val Cys Val Leu Ser Gly Thr  
115 120 125

Gly Ser Val Ala Asn Val Thr Leu Arg Gln Ala Ala Ala Pro Gly Gly  
130 135 140

Val Val Ser Leu Gln Gly Arg Phe Glu Ile Leu Ser Leu Thr Gly Ala  
145 150 155 160

Phe Leu Pro Gly Pro Ser Pro Pro Gly Ser Thr Gly Leu Thr Val Tyr  
165 170 175

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Leu Ala Gly Val Gln Gly Gln Val Val Gly Gly Ser Val Val Gly Pro  
180 185 190

Leu Leu Ala Ile Gly Ser Val Met Val Ile Ala Ala Thr Phe Ser Asn  
195 200 205

Ala Thr Tyr Glu Arg Leu Pro Met Glu Glu Glu Glu Asp Gly Gly Gly  
210 215 220

Ser Arg Gln Ile His Gly Gly Gly Asp Ser Pro Pro Arg Ile Gly Ser  
225 230 235 240

Asn Leu Pro Asp Leu Ser Gly Met Ala Gly Pro Gly Tyr Asn Met Pro  
245 250 255

Pro His Leu Ile Pro Asn Gly Ala Gly Gln Leu Gly His Glu Pro Tyr  
260 265 270

Thr Trp Val His Ala Arg Pro Pro Tyr  
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<211> 1130  
<212> DNA  
<213> Arabidopsis thaliana

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<223> G1945

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ttacacaaaa atccaaagac aaatctgaaa tctctaataa acaaataccat aaaataagaa 180  
aaacaaagat gaaaggtgaa tacagagagc aaaagagtaa cgaaatgttt tccaagcttc 240  
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gacaaatcat cggagggttc gtcgctggtc cacttatttc ggcaggaaca gtttacgtca 780

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agtcaggaca gatggcgagg agtgaggag agtcgtgtgg ggtatcaatg tacagttgcc      960
acatgggtgg ctctgatgtt atttgggccc ctacagccag agctccaccg ccatactaac     1020
caatccttct ttcacaaatc tctttctttc tttttttggt tttttttggt ttggggttagg     1080
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 <212> PRT  
 <213> Arabidopsis thaliana

<220>  
 <223> G1945polypeptide

<400> 44

Met Lys Gly Glu Tyr Arg Glu Gln Lys Ser Asn Glu Met Phe Ser Lys  
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Leu Pro His His Gln Gln Gln Gln Gln Gln Gln Gln Gln His Ser  
 20 25 30

Leu Thr Ser His Phe His Leu Ser Ser Thr Val Thr Pro Thr Val Asp  
 35 40 45

Asp Ser Ser Ile Glu Val Val Arg Arg Pro Arg Gly Arg Pro Pro Gly  
 50 55 60

Ser Lys Asn Lys Pro Lys Pro Pro Val Phe Val Thr Arg Asp Thr Asp  
 65 70 75 80

Pro Pro Met Ser Pro Tyr Ile Leu Glu Val Pro Ser Gly Asn Asp Val  
 85 90 95

Val Glu Ala Ile Asn Arg Phe Cys Arg Arg Lys Ser Ile Gly Val Cys  
 100 105 110

Val Leu Ser Gly Ser Gly Ser Val Ala Asn Val Thr Leu Arg Gln Pro  
 115 120 125

Ser Pro Ala Ala Leu Gly Ser Thr Ile Thr Phe His Gly Lys Phe Asp  
 130 135 140

Leu Leu Ser Val Ser Ala Thr Phe Leu Pro Pro Pro Pro Arg Thr Ser  
 145 150 155 160



Leu Ser Pro Pro Val Ser Asn Phe Phe Thr Val Ser Leu Ala Gly Pro  
165 170 175

Gln Gly Gln Ile Ile Gly Gly Phe Val Ala Gly Pro Leu Ile Ser Ala  
180 185 190

Gly Thr Val Tyr Val Ile Ala Ala Ser Phe Asn Asn Pro Ser Tyr His  
195 200 205

Arg Leu Pro Ala Glu Glu Glu Gln Lys His Ser Ala Gly Thr Gly Glu  
210 215 220

Arg Glu Gly Gln Ser Pro Pro Val Ser Gly Gly Gly Glu Glu Ser Gly  
225 230 235 240

Gln Met Ala Gly Ser Gly Gly Glu Ser Cys Gly Val Ser Met Tyr Ser  
245 250 255

Cys His Met Gly Gly Ser Asp Val Ile Trp Ala Pro Thr Ala Arg Ala  
260 265 270

Pro Pro Pro Tyr  
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<220>  
<223> G2155

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caatctttgt caccattgac cctcctatga gtccttacat cctcgaagtg ccatccggaa 240  
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catatttgta gtttgatttg actatcccca agttttgtat tttatcatat aaatttttgc      960
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<220>  
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Ser Lys Asn Lys Pro Lys Ala Pro Ile Phe Val Thr Ile Asp Pro Pro  
 35 40 45

Met Ser Pro Tyr Ile Leu Glu Val Pro Ser Gly Asn Asp Val Val Glu  
 50 55 60

Ala Leu Asn Arg Phe Cys Arg Gly Lys Ala Ile Gly Phe Cys Val Leu  
 65 70 75 80

Ser Gly Ser Gly Ser Val Ala Asp Val Thr Leu Arg Gln Pro Ser Pro  
 85 90 95

Ala Ala Pro Gly Ser Thr Ile Thr Phe His Gly Lys Phe Asp Leu Leu  
 100 105 110

Ser Val Ser Ala Thr Phe Leu Pro Pro Leu Pro Pro Thr Ser Leu Ser  
 115 120 125

Pro Pro Val Ser Asn Phe Phe Thr Val Ser Leu Ala Gly Pro Gln Gly  
 130 135 140

Lys Val Ile Gly Gly Phe Val Ala Gly Pro Leu Val Ala Ala Gly Thr  
145 150 155 160

Val Tyr Phe Val Ala Thr Ser Phe Lys Asn Pro Ser Tyr His Arg Leu  
165 170 175

Pro Ala Thr Glu Glu Glu Gln Arg Asn Ser Ala Glu Gly Glu Glu Glu  
180 185 190

Gly Gln Ser Pro Pro Val Ser Gly Gly Gly Gly Glu Ser Met Tyr Val  
195 200 205

Gly Gly Ser Asp Val Ile Trp Asp Pro Asn Ala Lys Ala Pro Ser Pro  
210 215 220

Tyr  
225

<210> 47  
<211> 1295  
<212> DNA  
<213> Arabidopsis thaliana

<220>  
<223> G1070

<400> 47  
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<210> 48  
 <211> 324  
 <212> PRT  
 <213> Arabidopsis thaliana

<220>  
 <223> G1070 polypeptide

<400> 48

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Phe Phe Leu His His His Gln Gln Gln Arg Asn Gln Thr Asp Gly Asp  
 35 40 45

Gln Gln Gly Gly Ser Gly Gly Asn Arg Gln Ile Lys Met Asp Arg Glu  
 50 55 60

Glu Thr Ser Asp Asn Ile Asp Asn Ile Ala Asn Asn Ser Gly Ser Glu  
 65 70 75 80

Gly Lys Asp Ile Asp Ile His Gly Gly Ser Gly Glu Gly Gly Gly Gly  
 85 90 95

Ser Gly Gly Asp His Gln Met Thr Arg Arg Pro Arg Gly Arg Pro Ala  
 100 105 110

Gly Ser Lys Asn Lys Pro Lys Pro Pro Ile Ile Ile Thr Arg Asp Ser  
 115 120 125

Ala Asn Ala Leu Arg Thr His Val Met Glu Ile Gly Asp Gly Cys Asp  
 130 135 140

Leu Val Glu Ser Val Ala Thr Phe Ala Arg Arg Arg Gln Arg Gly Val  
145 150 155 160

Cys Val Met Ser Gly Thr Gly Asn Val Thr Asn Val Thr Ile Arg Gln  
165 170 175

Pro Gly Ser His Pro Ser Pro Gly Ser Val Val Ser Leu His Gly Arg  
180 185 190

Phe Glu Ile Leu Ser Leu Ser Gly Ser Phe Leu Pro Pro Pro Ala Pro  
195 200 205

Pro Thr Ala Thr Gly Leu Ser Val Tyr Leu Ala Gly Gly Gln Gly Gln  
210 215 220

Val Val Gly Gly Ser Val Val Gly Pro Leu Leu Cys Ala Gly Pro Val  
225 230 235 240

Val Val Met Ala Ala Ser Phe Ser Asn Ala Ala Tyr Glu Arg Leu Pro  
245 250 255

Leu Glu Glu Asp Glu Met Gln Thr Pro Val His Gly Gly Gly Gly Gly  
260 265 270

Gly Ser Leu Glu Ser Pro Pro Met Met Gly Gln Gln Leu Gln His Gln  
275 280 285

Gln Gln Ala Met Ser Gly His Gln Gly Leu Pro Pro Asn Leu Leu Gly  
290 295 300

Ser Val Gln Leu Gln Gln Gln His Asp Gln Ser Tyr Trp Ser Thr Gly  
305 310 315 320

Arg Pro Pro Tyr

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<220>  
<223> G2657

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 <223> G2657 polypeptide

<400> 50

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Gln Gln Gln His Gln Gln Gln Gln Gln Gln Gln Phe Phe Leu His His  
 35 40 45

His Gln Gln Pro Gln Arg Asn Leu Asp Gln Asp His Glu Gln Gln Gly  
 50 55 60

Gly Ser Ile Leu Asn Arg Ser Ile Lys Met Asp Arg Glu Glu Thr Ser  
 65 70 75 80

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Asp Asn Met Asp Asn Ile Ala Asn Thr Asn Ser Gly Ser Glu Gly Lys  
85 90 95

Glu Met Ser Leu His Gly Gly Glu Gly Gly Ser Gly Gly Gly Gly Ser  
100 105 110

Gly Glu Gln Met Thr Arg Arg Pro Arg Gly Arg Pro Ala Gly Ser Lys  
115 120 125

Asn Lys Pro Lys Ala Pro Ile Ile Ile Thr Arg Asp Ser Ala Asn Ala  
130 135 140

Leu Arg Thr His Val Met Glu Ile Gly Asp Gly Cys Asp Ile Val Asp  
145 150 155 160

Cys Met Ala Thr Phe Ala Arg Arg Arg Gln Arg Gly Val Cys Val Met  
165 170 175

Ser Gly Thr Gly Ser Val Thr Asn Val Thr Ile Arg Gln Pro Gly Ser  
180 185 190

Pro Pro Gly Ser Val Val Ser Leu His Gly Arg Phe Glu Ile Leu Ser  
195 200 205

Leu Ser Gly Ser Phe Leu Pro Pro Pro Ala Pro Pro Ala Ala Thr Gly  
210 215 220

Leu Ser Val Tyr Leu Ala Gly Gly Gln Gly Gln Val Val Gly Gly Ser  
225 230 235 240

Val Val Gly Pro Leu Leu Cys Ser Gly Pro Val Val Val Met Ala Ala  
245 250 255

Ser Phe Ser Asn Ala Ala Tyr Glu Arg Leu Pro Leu Glu Glu Asp Glu  
260 265 270

Met Gln Thr Pro Val Gln Gly Gly Gly Gly Gly Gly Gly Gly Gly  
275 280 285

Gly Met Gly Ser Pro Pro Met Met Gly Gln Gln Gln Ala Met Ala Ala  
290 295 300

Met Ala Ala Ala Gln Gly Leu Pro Pro Asn Leu Leu Gly Ser Val Gln  
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Pro Pro Tyr

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<220>  
 <223> G1075 polypeptide



<400> 52

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20 25 30

Asp Gly Gly Ala Gly Gly Asn His His His His His His Asn His Asn  
35 40 45

His His Gln Gly Leu Asp Leu Ile Ala Ser Asn Asp Asn Ser Gly Leu  
50 55 60

Gly Gly Gly Gly Gly Gly Gly Ser Gly Asp Leu Val Met Arg Arg Pro  
65 70 75 80

Arg Gly Arg Pro Ala Gly Ser Lys Asn Lys Pro Lys Pro Pro Val Ile  
85 90 95

Val Thr Arg Glu Ser Ala Asn Thr Leu Arg Ala His Ile Leu Glu Val  
100 105 110

Gly Ser Gly Cys Asp Val Phe Glu Cys Ile Ser Thr Tyr Ala Arg Arg  
115 120 125

Arg Gln Arg Gly Ile Cys Val Leu Ser Gly Thr Gly Thr Val Thr Asn  
130 135 140

Val Ser Ile Arg Gln Pro Thr Ala Ala Gly Ala Val Val Thr Leu Arg  
145 150 155 160

Gly Thr Phe Glu Ile Leu Ser Leu Ser Gly Ser Phe Leu Pro Pro Pro  
165 170 175

Ala Pro Pro Gly Ala Thr Ser Leu Thr Ile Phe Leu Ala Gly Ala Gln  
180 185 190

Gly Gln Val Val Gly Gly Asn Val Val Gly Glu Leu Met Ala Ala Gly  
195 200 205

Pro Val Met Val Met Ala Ala Ser Phe Thr Asn Val Ala Tyr Glu Arg  
210 215 220

Leu Pro Leu Asp Glu His Glu Glu His Leu Gln Ser Gly Gly Gly Gly  
225 230 235 240

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Gly Gly Gly Asn Met Tyr Ser Glu Ala Thr Gly Gly Gly Gly Gly Leu  
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Pro Phe Phe Asn Leu Pro Met Ser Met Pro Gln Ile Gly Val Glu Ser  
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Trp Gln Gly Asn His Ala Gly Ala Gly Arg Ala Pro Phe  
 275 280 285

<210> 53  
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 <212> DNA  
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<220>  
 <223> G1076

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 <212> PRT  
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<220>  
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<400> 54

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Val Thr Pro Gly Ala Gly Met Gly His Phe Thr Val Asp Asp Glu Asp  
 35 40 45

Asn Asn Asn Asn His Gln Gly Leu Asp Leu Ala Ser Gly Gly Gly Ser  
 50 55 60

Gly Ser Ser Gly Gly Gly Gly Gly His Gly Gly Gly Gly Asp Val Val  
 65 70 75 80

Gly Arg Arg Pro Arg Gly Arg Pro Pro Gly Ser Lys Asn Lys Pro Lys  
 85 90 95

Pro Pro Val Ile Ile Thr Arg Glu Ser Ala Asn Thr Leu Arg Ala His  
 100 105 110

Ile Leu Glu Val Thr Asn Gly Cys Asp Val Phe Asp Cys Val Ala Thr  
 115 120 125

Tyr Ala Arg Arg Arg Gln Arg Gly Ile Cys Val Leu Ser Gly Ser Gly  
 130 135 140

Thr Val Thr Asn Val Ser Ile Arg Gln Pro Ser Ala Ala Gly Ala Val  
 145 150 155 160

Val Thr Leu Gln Gly Thr Phe Glu Ile Leu Ser Leu Ser Gly Ser Phe  
 165 170 175

Leu Pro Pro Pro Ala Pro Pro Gly Ala Thr Ser Leu Thr Ile Phe Leu  
 180 185 190

Ala Gly Gly Gln Gly Gln Val Val Gly Gly Ser Val Val Gly Glu Leu  
195 200 205

Thr Ala Ala Gly Pro Val Ile Val Ile Ala Ala Ser Phe Thr Asn Val  
210 215 220

Ala Tyr Glu Arg Leu Pro Leu Glu Glu Asp Glu Gln Gln Gln Gln Leu  
225 230 235 240

Gly Gly Gly Ser Asn Gly Gly Gly Asn Leu Phe Pro Glu Val Ala Ala  
245 250 255

Gly Gly Gly Gly Gly Leu Pro Phe Phe Asn Leu Pro Met Asn Met Gln  
260 265 270

Pro Asn Val Gln Leu Pro Val Glu Gly Trp Pro Gly Asn Ser Gly Gly  
275 280 285

Arg Gly Pro Phe  
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<223> G280

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<220>  
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<400> 56

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              35              40              45

Ala Lys His Ile Glu Ser Thr Gln Gln Thr Leu Pro Pro Ser His Met
              50              55              60

Thr Leu Leu Ser Tyr His Leu Asn Gln Met Lys Lys Thr Gly Gln Leu
65              70              75              80

Ile Met Val Lys Asn Asn Tyr Met Lys Pro Asp Pro Asp Ala Pro Pro
              85              90              95

Lys Arg Gly Arg Gly Arg Pro Pro Lys Gln Lys Thr Gln Ala Glu Ser
              100             105             110

Asp Ala Ala Ala Ala Ala Val Val Ala Ala Thr Val Val Ser Thr Asp
              115             120             125

Pro Pro Arg Ser Arg Gly Arg Pro Pro Lys Pro Lys Asp Pro Ser Glu
              130             135             140

Pro Pro Gln Glu Lys Val Ile Thr Gly Ser Gly Arg Pro Arg Gly Arg
145             150             155             160

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Pro Pro Lys Arg Pro Arg Thr Asp Ser Glu Thr Val Ala Ala Pro Glu  
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Pro Ala Ala Gln Ala Thr Gly Glu Arg Arg Gly Arg Gly Arg Pro Pro  
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<223> G1367

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<400> 58

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 35 40 45

Asn Asn Ile His Leu Tyr Gln Ala Ala Pro Pro Gln Gln Pro Gln Thr  
 50 55 60

Ser Pro Val Pro Pro His Pro Ser Ile Ser His Pro Pro Tyr Ser Asp  
 65 70 75 80

Met Ile Cys Thr Ala Ile Ala Ala Leu Asn Glu Pro Asp Gly Ser Ser  
 85 90 95

Lys Gln Ala Ile Ser Arg Tyr Ile Glu Arg Ile Tyr Thr Gly Ile Pro  
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Thr Ala His Gly Ala Leu Leu Thr His His Leu Lys Thr Leu Lys Thr  
115 120 125

Ser Gly Ile Leu Val Met Val Lys Lys Ser Tyr Lys Leu Ala Ser Thr  
130 135 140

Pro Pro Pro Pro Pro Pro Thr Ser Val Ala Pro Ser Leu Glu Pro Pro  
145 150 155 160

Arg Ser Asp Phe Ile Val Asn Glu Asn Gln Pro Leu Pro Asp Pro Val  
165 170 175

Leu Ala Ser Ser Thr Pro Gln Thr Ile Lys Arg Gly Arg Gly Arg Pro  
180 185 190

Pro Lys Ala Lys Pro Asp Val Val Gln Pro Gln Pro Leu Thr Asn Gly  
195 200 205

Lys Leu Thr Trp Glu Gln Ser Glu Leu Pro Val Ser Arg Pro Glu Glu  
210 215 220

Ile Gln Ile Gln Pro Pro Gln Leu Pro Leu Gln Pro Gln Gln Pro Val  
225 230 235 240

Lys Arg Pro Pro Gly Arg Pro Arg Lys Asp Gly Thr Ser Pro Thr Val  
245 250 255

Lys Pro Ala Ala Ser Val Ser Gly Gly Val Glu Thr Val Lys Arg Arg  
260 265 270

Gly Arg Pro Pro Ser Gly Arg Ala Ala Gly Arg Glu Arg Lys Pro Ile  
275 280 285

Val Val Ser Ala Pro Ala Ser Val Phe Pro Tyr Val Ala Asn Gly Gly  
290 295 300

Val Arg Arg Arg Gly Arg Pro Lys Arg Val Asp Ala Gly Gly Ala Ser  
305 310 315 320

Ser Val Ala Pro Pro Pro Pro Pro Pro Thr Asn Val Glu Ser Gly Gly  
325 330 335

Glu Glu Val Ala Val Lys Lys Arg Gly Arg Gly Arg Pro Pro Lys Ile  
340 345 350



Gly Gly Val Ile Arg Lys Pro Met Lys Pro Met Arg Ser Phe Ala Arg  
355 360 365

Thr Gly Lys Pro Val Gly Arg Pro Arg Lys Asn Ala Val Ser Val Gly  
370 375 380

Ala Ser Gly Arg Gln Asp Gly Asp Tyr Gly Glu Leu Lys Lys Lys Phe  
385 390 395 400

Glu Leu Phe Gln Ala Arg Ala Lys Asp Ile Val Ile Val Leu Lys Ser  
405 410 415

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Leu Glu Gly Ile Ala Glu Thr Thr Asn Glu Pro Lys His Met Glu Glu  
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<212> DNA  
<213> Arabidopsis thaliana

<220>  
<223> G2787

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gtgaagggtg tgaaggatgg agttacaagt gagaatcaag cagtggtgca agccataaaa 1380
gatctggaag cactaacagt gacggagacc gttgagccac aagttatgga agaagtgcag 1440
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ggaggacaag aagaaggaca agaaagagaa ggagaaacac agaccagac agaagcagag 1560
gcaatgcaag aagctctgtt ctgaagaata ataatgatct agaaaacaac ctagacataa 1620
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gaagaagaaa tagtagactc gttaatggtg ttgttgctcg tgtgtcttta accaaacctat 1800
aagacgtggc tgtaaattag cgatgtttct agtcttccat ctttaataat ctcttattgc 1860
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 <212> PRT  
 <213> Arabidopsis thaliana

<220>  
 <223> G2787 polypeptide

<400> 60

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			20					25					30		

MBI0034CIP.ST25.txt

Tyr Asn Asn His Val Val Phe Gln Pro Gln Pro Gln Thr Gln Thr Gln  
 35 40 45  
  
 Ile Pro Gln Pro Gln Met Phe Gln Leu Ser Pro His Val Ser Met Pro  
 50 55 60  
  
 His Pro Pro Tyr Ser Glu Met Ile Cys Ala Ala Ile Ala Ala Leu Asn  
 65 70 75 80  
  
 Glu Pro Asp Gly Ser Ser Lys Met Ala Ile Ser Arg Tyr Ile Glu Arg  
 85 90 95  
  
 Cys Tyr Thr Gly Leu Thr Ser Ala His Ala Ala Leu Leu Thr His His  
 100 105 110  
  
 Leu Lys Thr Leu Lys Thr Ser Gly Val Leu Ser Met Val Lys Lys Ser  
 115 120 125  
  
 Tyr Lys Ile Ala Gly Ser Ser Thr Pro Pro Ala Ser Val Ala Val Ala  
 130 135 140  
  
 Ala Ala Ala Ala Ala Gln Gly Leu Asp Val Pro Arg Ser Glu Ile Leu  
 145 150 155 160  
  
 His Ser Ser Asn Asn Asp Pro Met Ala Ser Gly Ser Ala Ser Gln Pro  
 165 170 175  
  
 Leu Lys Arg Gly Arg Gly Arg Pro Pro Lys Pro Lys Pro Glu Ser Gln  
 180 185 190  
  
 Pro Gln Pro Leu Gln Gln Leu Pro Pro Thr Asn Gln Val Gln Ala Asn  
 195 200 205  
  
 Gly Gln Pro Ile Trp Glu Gln Gln Gln Val Gln Ser Pro Val Pro Val  
 210 215 220  
  
 Pro Thr Pro Val Thr Glu Ser Ala Lys Arg Gly Pro Gly Arg Pro Arg  
 225 230 235 240  
  
 Lys Asn Gly Ser Ala Ala Pro Ala Thr Ala Pro Ile Val Gln Ala Ser  
 245 250 255  
  
 Val Met Ala Gly Ile Met Lys Arg Arg Gly Arg Pro Pro Gly Arg Arg  
 260 265 270  
  
 Ala Ala Gly Arg Gln Arg Lys Pro Lys Ser Val Ser Ser Thr Ala Ser  
 275 280 285

Val Tyr Pro Tyr Val Ala Asn Gly Ala Arg Arg Arg Gly Arg Pro Arg  
290 295 300

Arg Val Val Asp Pro Ser Ser Ile Val Ser Val Ala Pro Val Gly Gly  
305 310 315 320

Glu Asn Val Ala Ala Val Ala Pro Gly Met Lys Arg Gly Arg Gly Arg  
325 330 335

Pro Pro Lys Ile Gly Gly Val Ile Ser Arg Leu Ile Met Lys Pro Lys  
340 345 350

Arg Gly Arg Gly Arg Pro Val Gly Arg Pro Arg Lys Ile Gly Thr Ser  
355 360 365

Val Thr Thr Gly Thr Gln Asp Ser Gly Glu Leu Lys Lys Lys Phe Asp  
370 375 380

Ile Phe Gln Glu Lys Val Lys Glu Ile Val Lys Val Leu Lys Asp Gly  
385 390 395 400

Val Thr Ser Glu Asn Gln Ala Val Val Gln Ala Ile Lys Asp Leu Glu  
405 410 415

Ala Leu Thr Val Thr Glu Thr Val Glu Pro Gln Val Met Glu Glu Val  
420 425 430

Gln Pro Glu Glu Thr Ala Ala Pro Gln Thr Glu Ala Gln Gln Thr Glu  
435 440 445

Ala Ala Glu Thr Gln Gly Gly Gln Glu Glu Gly Gln Glu Arg Glu Gly  
450 455 460

Glu Thr Gln Thr Gln Thr Glu Ala Glu Ala Met Gln Glu Ala Leu Phe  
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<210> 61  
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<212> DNA  
<213> Arabidopsis thaliana

<220>  
<223> G3045

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agctgcagct tccttcactt tcttttgctg caacattttt catttcagta acttatcatc 120

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agattctttc tttttagttg aaatgaatcc attttaatta actaatcaaa tgaccattca 180
attccatctt ctaggctata cgacataatc taacaattct gttgacttgc tagtatcctt 240
tgtgtccac acaacataat gtctaaatca aattgatgca gggatacagt aatgtttacg 300
aaaaaccatt atagaagcta agtgggggata gttcacttac taagagtgcg gttcttttct 360
tgagatctcc gacgtttgca gctaccggtg ccactgaagt gctcttttgt tcatgcatag 420
aaaacccgac tttgacataa gtatacacac agttgtataa gcatggttat gtcttacatg 480
aactcttgta gatattgact caaatgaaat gataatgact aaccaaatag atttcaagaa 540
atacarcaaaa tccagatact atacacatct tttcaaaata ttacgaatca tttcaaattc 600
tgcagaacct aaaattaacc agatttgaga ccaccagaga caaataacat acaactctaa 660
actttttcca ctatatatgc agaacaaaca gtcaagaaca accgtataat tggatatatac 720
cttttgttaa aattatacat taagcattgt tatgtctaac atgaactaaa cacttgtgaa 780
atatttttg actcaaatta catgataact tcttaccaaa tagaccaatc actttcactt 840
ccacattata caaaaaaaga tttaatgaaa tacaccaaaa tccagataag atgcacatct 900
tttcaaagaa attacgaata atatcagata cttcacactc acaatagacc acatttgaga 960
caaataaaga cattactctg aactttatct actatatgca gaagaaacag tcaagaagaa 1020
caatattaaa taagacattt tcccaaaata caccaaaatc cagataagat acacattttt 1080
ctaaaaatac ggggaatttc agatactgca atcctaaaag tagaccacat ttgagaccag 1140
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aatcatataa ttggtatcag accatttcta aatttctttt gacattttgt gaataaagat 1260
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<210> 62  
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 <212> PRT  
 <213> Arabidopsis thaliana

<220>

<223> G3045 polypeptide

<400> 62

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20 25 30

Ala Thr Gly Val Ser Ala Thr Asp Thr Ala Ser Gln Lys Arg Gly Arg  
35 40 45

Gly Arg Pro Pro Lys Ala Lys Ser Asp Ser Ser Gln Ile Gly Ala Val  
50 55 60

Ser Ala Lys Ala Ser Thr Lys Pro Ser Gly Arg Pro Lys Arg Asn Val  
65 70 75 80

Ala Gln Ala Val Pro Ser Thr Ser Val Ala Ala Ala Val Lys Lys Arg  
85 90 95

Gly Arg Ala Lys Arg Ser Thr Val Thr Ala Ala Val Val Thr Thr Ala  
100 105 110

Thr Gly Glu Gly Ser Arg Lys Arg Gly Arg Pro Lys Lys Asp Asp Val  
115 120 125

Ala Ala Ala Thr Val Pro Ala Glu Thr Val Val Ala Pro Ala Lys Arg  
130 135 140

Arg Gly Arg Lys Pro Thr Val Glu Val Ala Ala Gln Pro Val Arg Arg  
145 150 155 160

Thr Arg Lys Val Cys Phe Ser Leu Ile Ser Leu Ser Leu Phe Thr Lys  
165 170 175

Cys Gln Lys Lys Phe Arg Asn Gly Leu Ile Pro Ile Ile  
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<212> DNA

<213> Lycopersicon esculentum

<220>

<223> BG134451

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acgcctaacg cactccgatc tcacgtgctt gaagtttcga ccgatgttga tatcatggaa      180
agtatctcca attacgcaag gcggagaggg agaggtgttt gtattcttag tggtagcggc      240
acagttacca acgtcaacct tcgtcagcct gctgcaagtg tagtcacact ccacggacgt      300
ttcgaaatac ttagcctctc aggtacggtg cttcctccgc ctgcaccgcc cgcctccagt      360
gggatctcta tattttttatc aggtggacaa ggacaagtgg ttggaggatc cgttgtaggg      420
cctttgatcg catcaggtcc agtcgtctta atggctgcct cttttgctaa tgctgtatct      480
gaacgacttc ctttgaggga agatgatgag gctcctgcta atgttcctac taca          534

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<210> 64
<211> 178
<212> PRT
<213> Lycopersicon esculentum

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<220>
<223> BG134451 polypeptide

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<400> 64

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Gly Glu Ser Asp Ser Asp Ala Gly Ala Ser Ser Gly Gly Gly Ala Pro
1          5          10          15

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Asn Arg Arg Pro Arg Gly Arg Pro Pro Gly Ser Lys Asn Lys Pro Lys
          20          25          30

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Pro Pro Ile Ile Val Thr Arg Asp Thr Pro Asn Ala Leu Arg Ser His
          35          40          45

```

```

Val Leu Glu Val Ser Thr Asp Val Asp Ile Met Glu Ser Ile Ser Asn
          50          55          60

```

```

Tyr Ala Arg Arg Arg Gly Arg Gly Val Cys Ile Leu Ser Gly Ser Gly
65          70          75          80

```

```

Thr Val Thr Asn Val Asn Leu Arg Gln Pro Ala Ala Ser Val Val Thr
          85          90          95

```

```

Leu His Gly Arg Phe Glu Ile Leu Ser Leu Ser Gly Thr Val Leu Pro
          100          105          110

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Pro Pro Ala Pro Pro Ala Ser Ser Gly Ile Ser Ile Phe Leu Ser Gly
          115          120          125

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MBI0034CIP.ST25.txt

Gly Gln Gly Gln Val Val Gly Gly Ser Val Val Gly Pro Leu Ile Ala  
130 135 140

Ser Gly Pro Val Val Leu Met Ala Ala Ser Phe Ala Asn Ala Val Phe  
145 150 155 160

Glu Arg Leu Pro Leu Glu Glu Asp Asp Glu Ala Pro Ala Asn Val Pro  
165 170 175

Thr Thr

<210> 65  
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<212> DNA  
<213> Brassica oleracea

<220>  
<223> BH566718

<400> 65  
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ccaacaacct gaccttgacc accagctaag taaatagtta aaccagtgga tccagggtgga 180  
gccggtccag gtaagaaaga accggttaga gaaagaatct caaacctccc ttgtaacgcc 240  
aatacagccg caccaccagg ggcagctgca acgggagcca ctgatgggtg acggagtgtg 300  
acgttagcca ccgtgcggtt accgctcaag atgcagatgc cacgttggcg ccgcctagcg 360  
aaagtagcta gggtttctat gacatcagtc ccactagcga tctccatgac atggctcttg 420  
agagcgtttg gagaatcacg cgtgacaaag attggtggct ttggtttggt cttggaacca 480  
gcaggacgtc cacgtggtcg gcgcgtggga gcttccacgg ctcttcacg tggctcgcg 540  
tcgtcgccgc tcaagttgtc tctatcgtct tcgttggtgt tggttggtgt gacttcttgg 600  
tgatgatgat ggtggttggt atgacctgag accatggcca tgttcatgga gatgtggaga 660  
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<211> 248  
<212> PRT  
<213> Brassica oleracea

<220>  
<223> BH566718 polypeptide

<400> 66



MBI0034CIP.ST25.txt

Met Arg Asn Pro Trp Trp Thr Gly Gln Val Asn Leu Ser Ser Leu Glu  
1 5 10 15

Thr Thr Pro Pro Ser Ser Ser Gln Leu Lys Thr Pro Asp Leu His Ile  
20 25 30

Ser Met Asn Met Ala Met Val Ser Gly His Asn Asn His His His His  
35 40 45

His Gln Glu Val Asn Thr Asn Asn Asn Asn Glu Asp Asp Arg Asp Asn  
50 55 60

Leu Ser Gly Asp Asp Arg Glu Pro Arg Glu Gly Ala Val Glu Ala Pro  
65 70 75 80

Thr Arg Arg Pro Arg Gly Arg Pro Ala Gly Ser Lys Asn Lys Pro Lys  
85 90 95

Pro Pro Ile Phe Val Thr Arg Asp Ser Pro Asn Ala Leu Lys Ser His  
100 105 110

Val Met Glu Ile Ala Ser Gly Thr Asp Val Ile Glu Thr Leu Ala Thr  
115 120 125

Phe Ala Arg Arg Arg Gln Arg Gly Ile Cys Ile Leu Ser Gly Asn Gly  
130 135 140

Thr Val Ala Asn Val Thr Leu Arg Gln Pro Ser Val Ala Pro Val Ala  
145 150 155 160

Ala Ala Pro Gly Gly Ala Ala Val Leu Ala Leu Gln Gly Arg Phe Glu  
165 170 175

Ile Leu Ser Leu Thr Gly Ser Phe Leu Pro Gly Pro Ala Pro Pro Gly  
180 185 190

Ser Thr Gly Leu Thr Ile Tyr Leu Ala Gly Gly Gln Gly Gln Val Val  
195 200 205

Gly Gly Ser Val Val Gly Ala Leu Met Ala Ala Gly Pro Val Met Leu  
210 215 220

Ile Ala Ala Thr Phe Ser Asn Ala Thr Tyr Glu Arg Leu Pro Leu Asp  
225 230 235 240

Glu Glu Glu Ala Ala Lys Glu Leu  
245

<210> 67  
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 <212> DNA  
 <213> Brassica oleracea

<220>  
 <223> BH685875

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 gcacctggcg gtgcgggtgg tggcaaaacg gttcccgtaa gcgaaagaat ctcaaactt 180  
 ccatgtaaaag tcacaactcc tctcctccg gctccaccac cgctatttcc gggagtgact 240  
 ggctgacgaa gaggtagcgtt agaaacgggtg ccgtttcctc ctaaaacgga gacccctctc 300  
 cctctccgcc tagcgtaagt ggacacacac tcaactatgt cagctccagg agatacttca 360  
 aggacgtgag atctaagcgc attggggcta tcgcgcgtga ctatgatcgg tggcttagct 420  
 ttgttcttag atcccgggtg acgtccacgt ggacgtttcc caggtgctga gcttgatgta 480  
 gccgggtctg aatcgggtag acccgggtga tgatgatcct tgtttgagtg atcagattct 540  
 cttgaatcat ccgacgggtg gtgttggtgc tgctggtggt gttgctggtg atgatgctgg 600  
 tcaaaaaaga tgatcccgcc 620

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 <212> PRT  
 <213> Brassica oleracea

<220>  
 <223> BH685875 polypeptide

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 Gln Gln Gln His His Pro Ser Asp Asp Ser Arg Glu Ser Asp His Ser  
 20 25 30  
 Asn Lys Asp His His Gln Pro Gly Leu Pro Asp Ser Asp Pro Ala Thr  
 35 40 45  
 Ser Ser Ser Ala Pro Gly Lys Arg Pro Arg Gly Arg Pro Pro Gly Ser  
 50 55 60  
 Lys Asn Lys Ala Lys Pro Pro Ile Ile Val Thr Arg Asp Ser Pro Asn  
 65 70 75 80

Ala Leu Arg Ser His Val Leu Glu Val Ser Pro Gly Ala Asp Ile Val  
85 90 95

Glu Cys Val Ser Thr Tyr Ala Arg Arg Arg Gly Arg Gly Val Ser Val  
100 105 110

Leu Gly Gly Asn Gly Thr Val Ser Asn Val Thr Leu Arg Gln Pro Val  
115 120 125

Thr Pro Gly Asn Ser Gly Gly Gly Ala Gly Gly Gly Gly Val Val Thr  
130 135 140

Leu His Gly Arg Phe Glu Ile Leu Ser Leu Thr Gly Thr Val Leu Pro  
145 150 155 160

Pro Pro Ala Pro Pro Gly Ala Gly Gly Leu Ser Ile Phe Leu Ser Gly  
165 170 175

Gly Gln Gly Gln Val Val Gly Gly Ser Val Val Ala Pro Leu Val Ala  
180 185 190

Ser Ala Pro Val Ile Leu Val Ala Ala Ser Phe Ser Asn Ala  
195 200 205

<210> 69  
<211> 929  
<212> DNA  
<213> Arabidopsis thaliana

<220>  
<223> CBF1 G40

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acttaaacct tatccagttt cttgaaacag agtactctga tcaatgaact cattttcagc 180  
tttttctgaa atgtttggct ccgattacga gcctcaaggc ggagattatt gtccgacgtt 240  
ggccacgagt tgtccgaaga aaccggcggg ccgtaagaag tttcgtgaga ctgcgtcaccc 300  
aatttacaga ggagttcgtc aaagaaactc cggtaagtgg gtttctgaag tgagagagcc 360  
aaacaagaaa accaggattt ggctcgggac tttccaaacc gctgagatgg cagctcgtgc 420  
tcacgacgtc gctgcattag ccctccgtgg ccgatcagca tgtctcaact tcgctgactc 480  
ggcttggcgg ctacgaatcc cggagtcaac atgcgccaag gatatccaaa aagcggtgc 540  
tgaagcggcg ttggcttttc aagatgagac gtgtgatacg acgaccacga atcatggcct 600

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 catgctttta ccgccgccgt ctgttcaatg gaatcataat tatgacggcg aaggagatgg 780  
 tgacgtgtcg ctttggagtt actaatattc gatagtcgtt tccatttttg tactatagtt 840  
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 <213> Arabidopsis thaliana

<220>  
 <223> CBF1 G40 polypeptide  
 <400> 70

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 20 25 30

Lys Pro Ala Gly Arg Lys Lys Phe Arg Glu Thr Arg His Pro Ile Tyr  
 35 40 45

Arg Gly Val Arg Gln Arg Asn Ser Gly Lys Trp Val Ser Glu Val Arg  
 50 55 60

Glu Pro Asn Lys Lys Thr Arg Ile Trp Leu Gly Thr Phe Gln Thr Ala  
 65 70 75 80

Glu Met Ala Ala Arg Ala His Asp Val Ala Ala Leu Ala Leu Arg Gly  
 85 90 95

Arg Ser Ala Cys Leu Asn Phe Ala Asp Ser Ala Trp Arg Leu Arg Ile  
 100 105 110

Pro Glu Ser Thr Cys Ala Lys Asp Ile Gln Lys Ala Ala Glu Ala  
 115 120 125

Ala Leu Ala Phe Gln Asp Glu Thr Cys Asp Thr Thr Thr Thr Asn His  
 130 135 140

Gly Leu Asp Met Glu Glu Thr Met Val Glu Ala Ile Tyr Thr Pro Glu  
 145 150 155 160

Gln Ser Glu Gly Ala Phe Tyr Met Asp Glu Glu Thr Met Phe Gly Met  
165 170 175

Pro Thr Leu Leu Asp Asn Met Ala Glu Gly Met Leu Leu Pro Pro Pro  
180 185 190

Ser Val Gln Trp Asn His Asn Tyr Asp Gly Glu Gly Asp Gly Asp Val  
195 200 205

Ser Leu Trp Ser Tyr  
210

<210> 71  
<211> 803  
<212> DNA  
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<220>  
<223> CBF2 G41

<400> 71  
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gggaaggaag aagtttcgtg agactcgtca cccaatttac agaggagttc gtcaaagaaa 180  
ctccggtaag tgggtgtgtg agttgagaga gccaaacaag aaaacgagga tttggctcgg 240  
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tggcagatct gcctgtctca atttcgctga ctcggttgg cggttacgaa tcccggaatc 360  
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gatgtgtcat atgacgacgg atgctcatgg tcttgacatg gaggagacct tgggtggaggc 480  
tatttatacg ccggaacaga gccaagatgc gttttatatg gatgaagagg cgatgttggg 540  
gatgtctagt ttgttgata acatggccga agggatgctt ttaccgtcgc cgtcggttca 600  
atggaactat aattttgatg tcgagggaga tgatgacgtg tccttatgga gctattaaaa 660  
ttcgattttt atttccattt ttggtattat agctttttat acatttgatc cttttttaga 720  
atggatcttc ttcttttttt ggttggtgaga aacgaatgta aatggtaaaa gttgttgtca 780  
aatgcaaatg tttttgagtg cag 803

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<211> 207  
<212> PRT  
<213> Arabidopsis thaliana

<220>

<223> CBF2 G41 polypeptide

<400> 72

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Ser Pro Lys Leu Ala Thr Ser Cys Pro Lys Lys Pro Ala Gly Arg Lys  
20 25 30

Lys Phe Arg Glu Thr Arg His Pro Ile Tyr Arg Gly Val Arg Gln Arg  
35 40 45

Asn Ser Gly Lys Trp Val Cys Glu Leu Arg Glu Pro Asn Lys Lys Thr  
50 55 60

Arg Ile Trp Leu Gly Thr Phe Gln Thr Ala Glu Met Ala Ala Arg Ala  
65 70 75 80

His Asp Val Ala Ala Ile Ala Leu Arg Gly Arg Ser Ala Cys Leu Asn  
85 90 95

Phe Ala Asp Ser Ala Trp Arg Leu Arg Ile Pro Glu Ser Thr Cys Ala  
100 105 110

Lys Glu Ile Gln Lys Ala Ala Ala Glu Ala Ala Leu Asn Phe Gln Asp  
115 120 125

Glu Met Cys His Met Thr Thr Asp Ala His Gly Leu Asp Met Glu Glu  
130 135 140

Thr Leu Val Glu Ala Ile Tyr Thr Pro Glu Gln Ser Gln Asp Ala Phe  
145 150 155 160

Tyr Met Asp Glu Glu Ala Met Leu Gly Met Ser Ser Leu Leu Asp Asn  
165 170 175

Met Ala Glu Gly Met Leu Leu Pro Ser Pro Ser Val Gln Trp Asn Tyr  
180 185 190

Asn Phe Asp Val Glu Gly Asp Asp Asp Val Ser Leu Trp Ser Tyr  
195 200 205

<210> 73

<211> 908

<212> DNA

<213> Arabidopsis thaliana

<220>  
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<220>  
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 gaactcattt tctgcttttt ctgaaatggt tggctccgat tacgagtctt cggtttcctc 180  
 aggcggtgat tatattccga cgcttgcgag cagctgcccc aagaaaccgg cgggtcgtaa 240  
 gaagtttcgt gagactcgtc acccaatata cagaggagtt cgtcggagaa actccggtaa 300  
 gtgggtttgt gaggttagag aaccaaacia gaaaacaagg atttggtcgt gaacatttca 360  
 aaccgctgag atggcagctc gagctcacga cgttgccgct ttagcccttc gtggccgatc 420  
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 tgcgacgacg gatcatgggt tcgacatgga ggagacgttg gtggaggcta tttacacggc 600  
 ggaacagagc gaaaatgcgt tttatatgca cgatgaggcg atgtttgaga tgccgagttt 660  
 gttggcta atggcagaag ggatgctttt gccgcttccg tccgtacagt ggaatcataa 720  
 tcatgaagtc gacggcgatg atgacgacgt atcggttatg agttattaaa actcagatta 780  
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 aatggaatct ncattatggt tgtaaaactg agaaacgagt gtaaattaaa ttgattcagt 900  
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 35 40 45

Pro Ile Tyr Arg Gly Val Arg Arg Arg Asn Ser Gly Lys Trp Val Cys  
50 55 60

Glu Val Arg Glu Pro Asn Lys Lys Thr Arg Ile Trp Leu Gly Thr Phe  
65 70 75 80

Gln Thr Ala Glu Met Ala Ala Arg Ala His Asp Val Ala Ala Leu Ala  
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Leu Arg Gly Arg Ser Ala Cys Leu Asn Phe Ala Asp Ser Ala Trp Arg  
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Leu Arg Ile Pro Glu Ser Thr Cys Ala Lys Asp Ile Gln Lys Ala Ala  
115 120 125

Ala Glu Ala Ala Leu Ala Phe Gln Asp Glu Met Cys Asp Ala Thr Thr  
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Asp His Gly Phe Asp Met Glu Glu Thr Leu Val Glu Ala Ile Tyr Thr  
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Ala Glu Gln Ser Glu Asn Ala Phe Tyr Met His Asp Glu Ala Met Phe  
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Glu Met Pro Ser Leu Leu Ala Asn Met Ala Glu Gly Met Leu Leu Pro  
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cgtgctcacg acgtcgctgc cctagccctc cgtggaagag gcgcctgcct caattatgcg 180  
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Cys Glu Val Arg Glu Pro Asn Lys Lys Ser Arg Ile Trp Leu Gly Thr  
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Phe Lys Thr Ala Glu Met Ala Ala Arg Ala His Asp Val Ala Ala Leu  
 35 40 45

Ala Leu Arg Gly Arg Gly Ala Cys Leu Asn Tyr Ala Asp Ser Ala Trp  
 50 55 60

Arg Leu Arg Ile Pro Glu Thr Thr Cys His Lys Asp Ile Gln Lys Ala  
 65 70 75 80

Ala Ala Glu Ala Ala Leu Ala Phe Glu Ala Glu Lys Ser Asp Val Thr  
 85 90 95

Met Gln Asn Gly Gln Asn Met Glu Glu Thr Thr Ala Val Ala Ser Gln  
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Ala Glu Val Asn Asp Thr Thr Thr Glu His Gly Met Asn Met Glu Glu  
 115 120 125

Ala Thr Ala Val Ala Ser Gln Ala Glu Val Asn Asp Thr Thr Thr Asp  
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His Gly Val Asp Met Glu Glu Thr Met Val Glu Ala Val Phe Thr Gly  
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Glu Gln Ser Glu Gly Phe Asn Met Ala Lys Glu Ser Thr Val Glu Ala  
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